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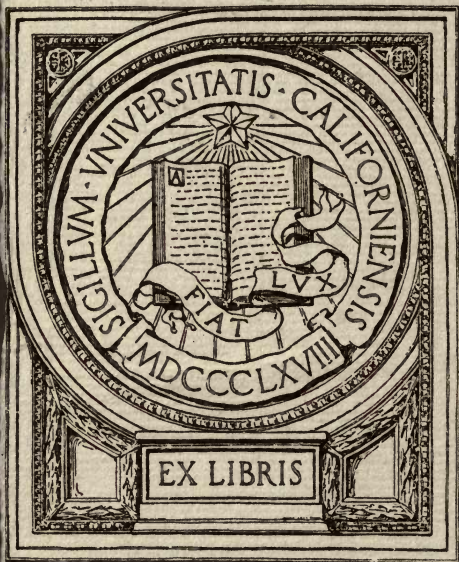
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CODE OF RULES

GOVERNING THE CONDITION OF, AND
REPAIRS TO, FREIGHT CARS

FOR THE

INTERCHANGE OF TRAFFIC,

ADOPTED BY THE

MASTER CAR BUILDERS' ASSOCIATION

REVISED AT

Atlantic City, N. J., June, 1911.

PUBLISHED BY THE ASSOCIATION,
OLD COLONY BUILDING, CHICAGO, ILL.

1911.

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CODE OF RULES

Governing the Condition of, and Repairs
to, Freight Cars for the Interchange
of Traffic.

PREFACE.

These rules make car owners responsible for, and therefore chargeable with, the repairs to their cars necessitated by ordinary wear and tear in fair service, so that defect cards will not be required for any defects thus arising.

Railroad companies handling cars are responsible for damage done to any car by unfair usage, derailment or accident, and for improper repairs made by them, and they must make proper repairs at their own expense, or issue defect card covering all such damage or improper repairs.

Inspection of freight cars for interchange and method of loading will be in accordance with this Code of Rules and the Rules for Loading Materials, issued by this Association.

CARE OF FOREIGN FREIGHT CARS.

RULE I. Each railway company shall give to foreign cars, while on its line, the same care as to oiling, packing, inspection and adjusting brakes, that it gives to its own cars.

INTERCHANGING FREIGHT CARS.

RULE 2. No car having defects constituting a violation of the law should be offered in interchange.

Cars having defects for which delivering company is responsible must be properly carded when offered in interchange.

Empty cars offered in interchange must be accepted if in safe and serviceable condition, the receiving road to be the judge in cases not provided for in Rules 3 and 4 and 32 to 88, inclusive.

Owners must receive their own cars when offered home, subject to the provisions of these rules.

Loaded cars offered in interchange must be accepted, except that receiving line may reject leaking tank cars and cars not loaded in accordance with the rules for loading materials, A. R. A. Car Service Rule 15 to apply (see page 88) when transfer or rearrangement of load is necessary.

When it becomes necessary to transfer load, such car, when empty, may be returned to the delivering line.

In case cars are rejected by the receiving road and returned to the delivering company, all of the defects objected to must be designated on a return card of the form shown on page 79, filled in with ink or black indelible pencil, and placed on car adjacent to the destination card.

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USE OF DEFECT, REPAIR AND JOINT EVIDENCE CARDS.

RULE 3. If a car has defects for which the owners are not responsible, the receiving line shall require that a defect card be securely attached to the car, as per Rule 14.

Defect cards shall not be required for any damage that is so slight that no repairs are necessary.

RULE 4. Defect cards shall not be required for defects for which owners are responsible, except for missing material on cars offered in interchange, as provided for in Rules 33, 46, 55 and 64, or in cases of defective air-brake parts, as specified in Rule 56. Defect cards shall not be required of the delivering road for improper repairs that were not made by it, with the exception of the cases provided for in Rules 34, 35, 58, 66 and 70.

RULE 5. Defect cards shall be of the form shown on page 79. They should be of cardboard, printed in red ink on both sides, and shall be filled in on both sides with ink or black indelible pencil. The cards must plainly specify in full each item for which charges are authorized, indicating the location of defects, as provided for in Rule 14.

RULE 6. Any road making partial repairs of defects on a car which are covered by defect cards will have the defects repaired crossed off the original card with ink or indelible pencil and card replaced on car. A copy of the

RULE 6—*Continued.*

card accompanying the bill with the defects which were not repaired crossed off will be sufficient authority to bill.

Use of
Defect Card.

RULE 7. When repairs of any kind are made to foreign cars a repair card must be securely attached to car, as per Rule 14. This card must specify fully the repairs made, and reason for same, the date and place where made, and name of road making repairs; also show location of parts repaired or renewed, as per Rule 14.

If no bill is to be rendered, the billing repair card must be attached to the monthly bill, with the words "no bill" written across the face of the card. In case no bill is to be rendered, the words "no bill" shall be written across the face of the repair card.

Use of
Repair Card.

RULE 8. The Repair Card shall be of the forms as shown on pages 82, 83 and 84, made in triplicate, to be known as Repair Card, Billing Repair Card and Record Repair Card. The Repair Card to be tacked on car shall be of cardboard, printed on both sides in black ink, and shall be filled in on both sides, one side of which must be filled in with ink or black indelible pencil. The items of repairs must be in writing. The Billing Repair Card shall be printed on one side and show the same information as the Repair Card, and shall be attached to bill as authority for charge. The Record Repair Card shall be retained by party making repairs.

RULE 9. The following information must be specified on repair cards:

Use of Repair Card.	M. C. B. couplers or parts thereof	{	New or secondhand, applied.
			Steel or malleable, applied and removed.
			Size of shank, applied and removed.
			Size of butt, applied and re- moved.
			Complete, or name of part or parts, applied.
			Open or closed knuckle, ap- plied and removed.
	Wheels and axles, R. and R.	{	Yoke or stem attachment, applied and removed.
			Cast iron, cast steel, rolled or forged steel or steel- tired wheels.
			New or secondhand, applied.
			Cause of removal, see Rule 10.
	Journal bearings, R. and R.	{	Solid, filled or other kind.
			Length of bearings.
			Box number (see Rule 14).
	Metal brake beams or parts thereof, R. and R.	{	Make or name of beam.
			New or secondhand.
			Complete, or part or parts.
Cause of removal.			
Brake shoes, applied.	{	Part or parts scrapped.	
		Cast or reinforced back.	
Triple valve, R. and R.	{	Kind.	

When triple valve or cylinder is cleaned, the initial of road and date of last cleaning must be shown.

If necessary to remove load to make repairs, as specified in Rule 107, it must be plainly stated.

RULE 10. In noting the cause of removal of

RULE 10 — *Continued.*

wheels and axles, the terms used in Rules 68 to 86, inclusive, shall be used, and the dimensions of the defect or variation from the prescribed limits should be carefully specified.

In all cases of forged or rolled steel wheels, the actual thickness of tread must be shown before and after turning off, measured from base line of tread to the condemning limit of tread, which is $\frac{1}{4}$ inch above the witness groove; also show actual thickness of tread on other wheels applied. This information must be reported to car owners regardless of whether repairs are chargeable or not.

Use of
Repair Card.

RULE 11. Journal bearings having a lining $\frac{3}{8}$ inch thick or thicker, shall be charged as filled journal bearings, and not as lined journal bearings.

RULE 12. The evidence of a joint inspector, or the joint evidence of two inspectors, one representing the owner of the car and the other representing a railroad company, that the repairs are not proper, shall be final; the evidence to be signed only after an actual inspection has been made.

Use of
Joint Evi-
dence Card.

A joint evidence card shall be used for this purpose, which shall describe and show location of parts repaired or renewed, as per Rule 14. This card shall be of the form shown on page 80.

RULE 13. The joint evidence card, accompanied by a proper repair card, upon which a bill has been made, shall be used as authority

RULE 13 — *Continued.*

Use of
Joint Evi-
dence Card.

for rendering bill, but if unaccompanied by such repair card, the joint evidence card shall be sent to the company against which the evidence has been presented, and it shall furnish a defect card covering the wrong repairs if it made them.

RULE 14. The end of car toward which the cylinder push rod travels shall be known as B end and the opposite end shall be known as A end.

Facing the B end of car, in their order on the right side of car, the journal boxes and contained parts shall be known as R1, R2, R3 and R4, and similarly those on the left side of car shall be known as L1, L2, L3 and L4.

Defect and repair cards must be securely attached to the car with four tacks, preferably on the outside face of intermediate sill between cross-tie timbers on wooden cars, and on steel cars to cardboard located either on cross-tie under car or on inside of side sill at the end of car.

RULE 15. Duplicate defect or repair cards must be furnished promptly on request for lost or illegible cards.

GENERAL INSTRUCTIONS.

RULE 16. Any car having defects which render it unsafe to run, unsafe to trainmen, or to any lading suitable to the car, may be repaired.

Repairs to foreign cars shall be promptly

RULE 16 — *Continued.*

made, and the work shall conform in detail to the original construction, and with the quality of material originally used, except as provided for in Rules 17 and 18.

- RULE 17. In repairing foreign cars, M. C. B. Standards may be used when of dimensions that do not impair the strength of cars, in lieu of the parts forming their original construction.

When using materials for repairs to foreign cars for which the Master Car Builders' Association has adopted specifications as a standard, the materials must comply with the requirements of these specifications.

Malleable iron M. C. B. Standards may be substituted for gray iron M. C. B. Standards, but the net cost to the car owner in such cases must be no greater than if the original kind and weight of material had been applied. Gray iron M. C. B. Standards may be substituted for malleable M. C. B. Standards, but in such cases the debits and credits must be for what is actually applied and removed. Repair card must state kind of material applied and removed.

When necessary to renew brake beams, any metal brake beam meeting M. C. B. specifications may be used, provided that the beam applied is as strong as the beam standard to the car and does not require any change in hangers or other details.

Cast-iron brake shoes may be replaced with

RULE 17—*Continued.*

brake shoes with reinforced back, in repairs to foreign cars.

White pine, yellow pine, fir or cypress may be used when repairing siding on foreign cars when of equal grade or quality to the material standard to the car. Fir or oak may be substituted for pine when splicing longitudinal sills.

RULE 18. Couplers of the vertical plane type, other than M. C. B. Standard, when replaced with M. C. B. Standard, the expense of alteration thus necessitated shall be chargeable to car owners.

Couplers with stem attachments may be replaced with pocket attachment.

Couplers that exceed the distance of $5\frac{1}{8}$ inches between point of knuckle and guard arm, measured perpendicularly to guard arm, must be replaced, in which case owners are responsible. (See drawing, p. 11.)

When M. C. B. couplers of another make are applied to a car, the uncoupling arrangement shall be made operative at the expense of the company making the repairs.

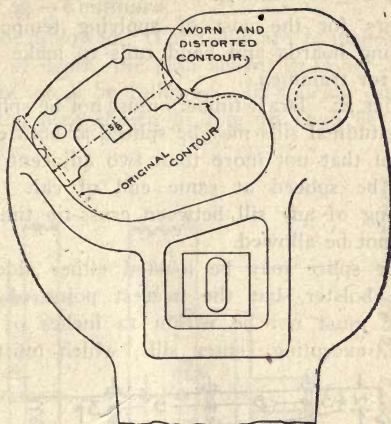
RULE 19. In making repairs to foreign cars, the following materials shall not be used:

Malleable iron couplers.

Open knuckles.

Malleable or steel-backed journal bearings.

RULE 20. Any company finding cars not within the limits of standard height for couplers, may make repairs and charge to owners.

RULE 20—*Continued.*

Cars should be adjusted in height when empty, as far as possible, and in order to justify a bill for this work under the rules of interchange, an empty car measuring $32\frac{1}{2}$ inches or less should be adjusted to $34\frac{1}{2}$ inches or within $\frac{1}{4}$ inch thereof. A loaded car measuring $31\frac{1}{2}$ inches or less should be adjusted to $33\frac{1}{2}$ inches or within $\frac{1}{4}$ inch thereof, or as nearly as possible to such height as will bring it to $34\frac{1}{2}$ inches when the car is unloaded, the height to be measured from the top of the rails to the center line of the coupler shank. When bill is to be rendered, the height of car before and after altering must be shown on repair cards.

¹RULE 21. Bills may be rendered against car

RULE 21 — *Continued.*

owners for the cost of applying temporary running boards and hand rails to make cars safe for trainmen.

RULE 22. Draft timbers must not be spliced. Longitudinal sills may be spliced at both ends, except that not more than two adjacent sills may be spliced at same end of car. The splicing of any sill between cross-tie timbers will not be allowed.

The splice may be located either side of body bolster, but the nearest point of any splice must not be within 12 inches of the same, excepting center sills, which must be

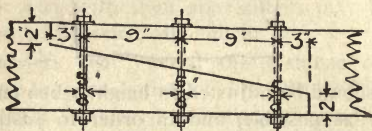


FIG. 8.

spliced between body bolster and cross-tie timber, but not within 24 inches of body bolster.

In splicing longitudinal sills other than center sills, if same are less than 12 inches in depth, the plan shown in either Fig. 8 or 9C

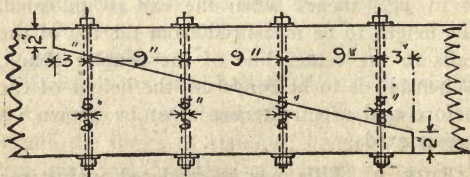


FIG. 9.

RULE 22 — *Continued.*

shall be followed. If the sills are 12 inches or more in depth, the plan shown in either Fig. 9 or 9C shall be followed. In splicing center sills the plan shown in Fig. 9B shall be followed.

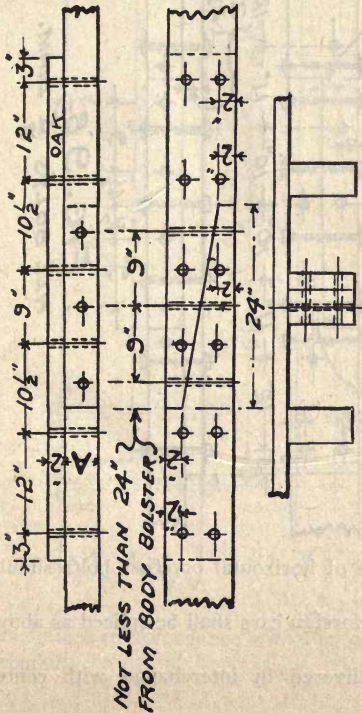
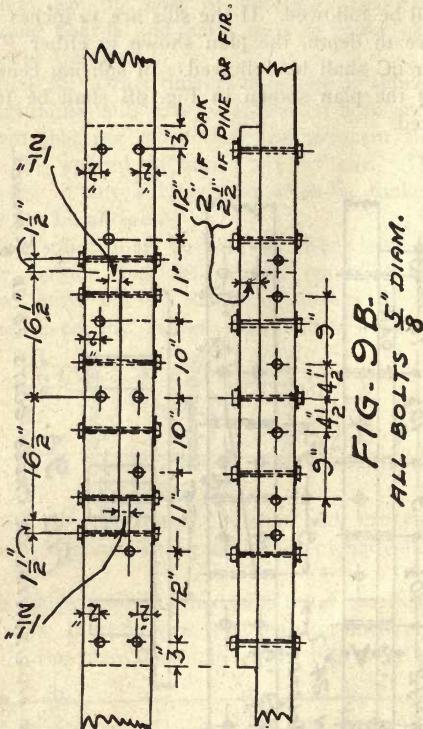


FIG. 9A.

THE SIZE OF HORIZONTAL OR CROSS BOLTS TO BE $\frac{5}{8}$ INCHES.

RULE 22 — Continued.



The size of horizontal or cross bolts should be $\frac{5}{8}$ inch.

Sills of foreign cars shall be spliced as above provided.

Cars delivered in interchange with center

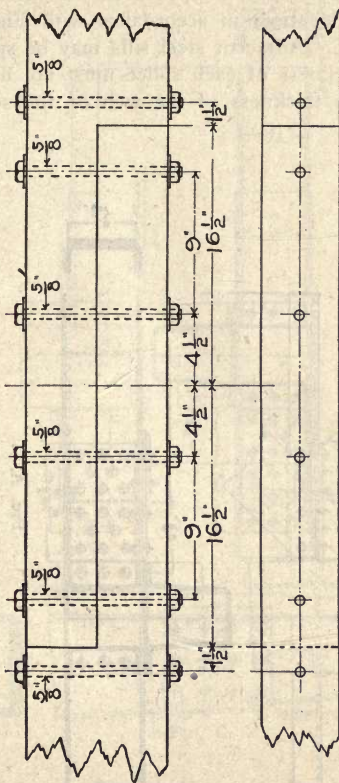
RULE 22 — *Continued.*

FIG. 9 C.

sills spliced in accordance with Fig. 9A will be accepted.

RULE 22 — *Continued.*

Steel sills may be spliced in the most convenient location, in accordance with Figs. A, B and C. Adjacent steel sills may be spliced. The thickness of each splice must not be less than the thickness of the web of the section spliced.

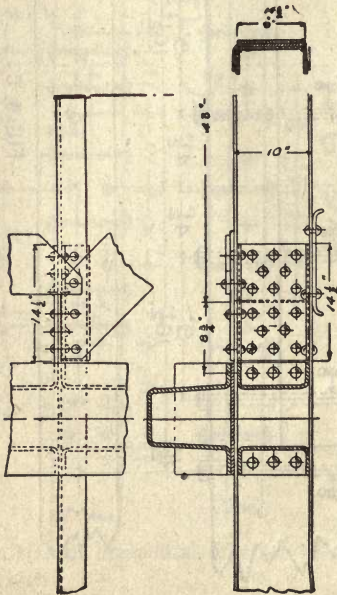


FIG. A

RULE 22 — Continued.

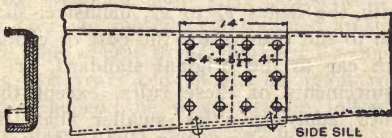
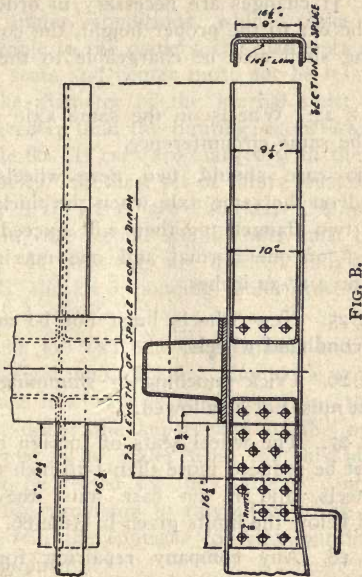


FIG. C.

RULE 23. In making repairs for which owners are responsible, wheels other than 33-inch may be replaced with 33-inch wheels, if prac-

RULE 23 — *Continued.*

licable. If changes are necessary in order to bring the car to the proper height, the cost of so doing shall also be chargeable to the car owner.

RULE 24. Wheels on the same axle must be of the same circumference.

In no case should two new wheels be mounted on the same axle when the thickness of the two flanges together will exceed the thickness of one normal and one maximum flange, or 2 17-32 inches.

RULE 25. New wheels must not be mated with secondhand wheels.

RULE 26. Prick punching or shimming the wheel fit must not be allowed.

RULE 27. The wheel seats of foreign axles must not be reduced more than 1-16 inch to fit the wheels, and in no case must they be reduced below the limits given in Rule 86.

RULE 28. Any company repairing foreign cars with wrong material, and not in compliance with the Rules 17 to 27, inclusive, shall be liable to the owners for the cost of changing such car to the original standard, or to the requirements of these rules, except that companies applying axles smaller than the limits given in Rule 86 shall not be held responsible for improper repairs if the car is not stenciled showing the capacity, maximum or minimum weight.

RULE 29. When secondhand axles are ap-

RULE 29 — *Continued.*

plied under conditions which make them chargeable to the owners, the diameters of the wheel seats and center must not be less than, and the diameter of the journal must be $\frac{1}{8}$ inch greater than the limiting diameters given in Rule 86. If cars are marked with the word "Capacity," the first set of limits must be followed. If cars are marked "Maximum Weight," the second set of limits must be followed. If tank cars are marked limit weight I or II, the corresponding limits must be followed.

RULE 30. (a) The date (month and year), also weight and capacity, should be stenciled on each new car as it comes from the car works, under the supervision of the owner's inspector. The scales used for this purpose should be tested by the railroad company's inspector, provision to this effect to be incorporated in the contract covering purchase of the equipment.

(b) Wooden and steel underframe cars one year old should be reweighed and restenciled, the weight to be followed by one star; cars two years old should be again weighed and stenciled, the weight to be followed by two stars; cars three or more years old should be again weighed and stenciled, the weight to be followed by three stars, which will indicate final weight.

(c) Steel cars should be reweighed and restenciled after they have been in service twelve

RULE 30 — *Continued.*

months, the weight to be followed by three stars, indicating final weight.

(d) If cars are materially changed by reason of new appliances or general repairs, they should be reweighed and restenciled without change in the number of stars.

(e) Unless the owner instructs otherwise, any car without stenciling, or with a variation of 500 pounds, should be immediately reweighed and restenciled and car owner notified of old and new weights. The Official Railway Equipment Register will designate the proper officer to whom these special reports should be made.

(f) The date (month and year) of each reweighing should be stenciled the same as provided for new cars in paragraph (a).

RULE 31. The relightweighing of cars, as provided above, to be charged to car owners in accordance with Rule No. 107, except when the weight of the car is changed on account of repairs due to unfair usage; when such repairs are made on authority of defect card, charge for relightweighing may be included on same authority.

Cars must be cleaned before reweighing.

PARTS OF CARS WHICH JUSTIFY REPAIRS IF OWNERS ARE RESPONSIBLE, OR REPAIRS OR CARDING IF DELIVERING COMPANY IS RESPONSIBLE.

BODIES.

RULE 32. Damage of any kind to the body of the car due to unfair usage, derailment or accident.

Defect cards shall not be required for any damage so slight that no repairs are necessary, the receiving line to be the judge.

RULE 33. Material missing from bodies of cars offered in interchange, except grain doors, water troughs and attachments, all inside or concealed parts of cars; also nuts, body truss-rod saddles on bolsters, roof boards, side and end fascia, wooden door caps and ventilated side and end doors unless car is stenciled for such doors.

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responsible.

RULE 34. M. C. B. couplers not equipped with steel or wrought-iron knuckles.

RULE 35. Cars equipped with M. C. B. couplers having pocket rear-end attachments and so stenciled, if found with stem or spindle attachments instead of pocket.

RULE 36. Uncoupling attachments of M. C. B. couplers offered in interchange must be made operative before moving from interchange points.

COMBINATIONS OF DAMAGES TO CARS WITH WOODEN UNDERFRAMES OR COMPOSITE WOOD AND METAL UNDERFRAMES WHICH DENOTE UNFAIR USAGE, IF EXISTING AT THE SAME END OF CAR. (Rules 37 to 42, inclusive.)

RULE 37. Damage to coupler body accompanied by damage to draft timber (or its substitute), and end sill.

RULE 38. Damaged coupler pocket, accompanied by damage to draft timber (or its substitute), and end sill.

RULE 39. Damaged end sill, accompanied by damage to draft timber (or its substitute) or longitudinal sill, and damage to either coupler body or pocket.

RULE 40. Damaged longitudinal sill, accompanied by damage to end sill.

RULE 41. Damaged longitudinal sills, if necessitating replacement or splicing of more than two sills.

RULE 42. Damaged corner and end posts, if necessitating the renewal of more than two posts.

This will include damage to upper structure of cars with metal underframes.

An American continuous draft key and rod shall not enter into a combination of defects denoting unfair usage.

It will be assumed that a missing coupler and attachments are damaged unless shown to the contrary. This only refers to cases where the coupler if broken would enter into the combination of defects.

ALL-STEEL OR ALL-STEEL UNDERFRAME CARS.

RULE 43. Damage to bodies of all-steel cars, or damage to underframe of all-steel underframe cars, when necessary to repair, if caused by unfair usage.

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responsible.

Longitudinal sills, end sills and other steel parts of cars which become defective due to corrosion and which were not damaged in accident or by unfair usage.

When repairs exceed the combinations as covered by Rules 37 to 42, inclusive, owner's authority must be obtained before repairs are made.

Owners
responsible.

RULE 44. Improperly loaded or overloaded cars. (See "Rules for Loading Materials.")

The transfer or rearrangement of lading, as prescribed in A. R. A. Car Service Rule 15, see page 88.

RULE 45. Temporary advertisements tacked, glued, pasted or varnished on cars.

The size and character of cards which may be used on freight cars may be divided into four classes, viz.:

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I. Routing Cards: Cards bearing information required by the railroads, such as initial and number of cars, consignee, consignor, destination, contents, point of shipment, route, etc. These cards may be issued by consignor.

To be of cardboard size, vertical dimension maximum 5 inches, horizontal dimension maximum 8 inches.

To be permitted on all loaded cars.

RULE 45 — *Continued.*

No picture or trade-mark to be permitted.

Space for railroad information to occupy lower three-fifths of card.

Any printing on the upper two-fifths to be limited to letters not exceeding one-half inch in any dimension.

All printing to be in black ink.

A copy of card, in reduced form, is shown herewith.

(Name of Consignor, etc.)

(Name of Consignor, etc., in letters not more than one-half inch in any dimension.)

.....

Initial and No..... Contents.....

Point of Shipment..... R. R.

Consignee and Destination.....

Via

Date.....

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responsible.

2. Special Cards: Required by the Regulations for the Transportation of Explosives formulated by the Interstate Commerce Commission and the Regulations for the Transportation of Inflammable Articles and Acids prescribed by the American Railway Association. They shall be used, be of the text and size described, and be attached to cars as prescribed by said regulations.

3. Symbol (e. g., fast freight line, manifest

RULE 45 — *Continued.*

freight, etc.) and various M. C. B. cards: Cards prescribed by individual roads for special purposes. Their size, use, text and method of application will be prescribed by each individual road to suit its requirements. These cards may only be issued by railroads and may include same information as routing cards except name of consignor.

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responsible.

4. Special Cards: Cards required by United States Customs Regulations or by State authorities, such, for example, as quarantine regulations, and must be used as prescribed by the United States Customs Regulations.

RULE 46. If the car has air-signal or train-line steam pipes, the hose, pipes and couplings are at owner's risk, unless the car is stenciled that it is so equipped.

RULE 47. When two or more cars chained together, or any cars which require switch chains to handle them, are delivered at an interchange point, the receiving road shall deliver to the delivering road at the time an equivalent number of switch chains of the same size as the chains so used on the cars delivered, or, in lieu thereof, furnish a defect card for such chains.

RULE 48. Side doors, end doors, roof doors, grain doors, water troughs and attachments, and all inside or concealed parts of cars missing or damaged under fair usage, and failure or loss under fair usage of any part of the body of the car, except as provided for in Rule 33.

Owners
responsible.

RULE 49. Steel cars not equipped with cardboards for repair and defect cards.

RULE 50. Cars not within the limits of standard height for couplers, $31\frac{1}{2}$ inches minimum to $34\frac{1}{2}$ inches maximum for standard-gauge cars.

RULE 51. Couplers that exceed the distance of $5\frac{1}{8}$ inches between point of knuckle and guard arm, as described in Rule 18.

Owners
responsible.

RULE 52. Running boards in bad order or insecurely fastened.

Sill steps, ladders, grabirons bent, broken, missing or insecurely fastened, except when car has been wrecked, cornered or raked.

Handholds or grabirons must be of wrought iron or steel and secured by bolts, rivets or lag screws.

Lag screws must not be used on cars stenciled "United States Safety Appliances, Standard," or on cars stenciled "United States Safety Appliances."

BRAKES.

RULE 53. All freight cars offered in interchange must be equipped with air brakes.

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responsible.

After September 1, 1912, all freight cars offered in interchange must be equipped with M. C. B. Standard $1\frac{1}{4}$ -inch train line, angle cocks and quick-action triple valve.

After September 1, 1912, all freight cars offered in interchange not equipped with pressure-retaining valves.

RULE 54. Damage to any part of the brake apparatus caused by unfair usage, derailment or accident.

RULE 55. Brake material missing from cars offered in interchange.

RULE 56. Burst or torn air hose, burst or leaky pipes, account of seams, on cars offered in interchange.

RULE 57. Missing air-brake hose, missing or damaged air-brake pipe, fittings, angle cocks, cut-out cocks, cylinders, reservoirs, triple valves, brake-pipe air strainer or dirt collector, release valves, pressure-retaining valves or any parts of these items.

RULE 58. Cars equipped with air-brake hose other than M. C. B. Standard $1\frac{3}{8}$ inches and labeled as shown by cut on next page.

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Company
responsible.

RULE 58—*Continued.*

Name of purchaser may be substituted for initials or name of road.

A. B. C. ROAD 1 3-8"					M. C. B. STD.				
					SERIAL NUMBER				
					NAME OF MANUFACTURER				
— 1 1 A 1 2 3 4 5 6					— 1 2 3 4 5 6 R 1 2 3 4 5 6				
— 1 2 3 4 5 6					— 1 2 3 4 5 6				

The above gives outline of modification of label. Extension being on right-hand end.

NOTE.—Cars will be accepted in interchange with M. C. B. $1\frac{1}{4}$ -inch Standard hose and so labeled, if date is cut out showing application

RULE 58 — *Continued.*

prior to September 1, 1909, or if date is not cut out and the label shows date of manufacture prior to September 1, 1909.

RULE 59. Damage to interior portion of cylinder or triple valve, leaky pipes, account of rust or seams, air hose burst from air pressure, torn air hose and defective, missing or worn-out parts of brakes not elsewhere provided for, which have failed under fair usage; except as provided for in Rules 55, 56 and 57.

RULE 60. Cylinders or triple valves of air-brake cars not cleaned, oiled and tested within twelve months, and the initial of road, together with date of last cleaning, oiling and testing, preferably stenciled on the brake cylinder or auxiliary reservoir, or if same is not readily visible, in a convenient location at release rod, with white paint.

Owners
responsible.

Triple valves cleaned should be tested on an M. C. B. test rack.

RULE 61. All cars not originally equipped with retaining valves.

RULE 62. In replacing air-brake hose on foreign cars for which bills are made, new M. C. B. 1 $\frac{3}{8}$ -inch Standard hose, and so labeled, must be used.

TRUCKS.

RULE 63. Damage of any kind to the truck due to unfair usage, derailment or accident.

Delivering
Company
responsible.

RULE 64. Material missing from trucks of

RULE 64 — *Continued.*

cars offered in interchange, except journal-box lids and nuts.

RULE 65. Journal bearings and journal box bolts which require renewal by reason of change of wheels or axles for which the delivering company is responsible, regardless of the previous condition of the bearings.

Delivering
Company
responsible.

RULE 66. Cars intended to be equipped with metal brake beams and so stenciled, if found with wooden brake beams.

After September 1, 1915, cars equipped with wooden or trussed wooden brake beams will not be accepted in interchange.

RULE 67. Defective, missing or worn-out parts of trucks not elsewhere provided for, which have failed under fair usage, or if any part of the truck frame or attachments is less than $2\frac{1}{2}$ inches above the top of the rail.

Owners
responsible.

WHEELS.

RULE 68. Flat-sliding, cast-iron wheels: if the spot caused by sliding is $2\frac{1}{2}$ inches or over in length. (Care should be taken to distinguish this defect from *worn through chill*.) See Fig. 2.

Delivering
Company
responsible.

Flat sliding, steel or steel-tired wheels: if the spot caused by sliding is $2\frac{1}{2}$ inches or over in length; a separate defect card to be furnished.

RULE 69. Broken flange, except as in Rule 78, chipped flange, if chip is on throat side of

RULE 69 — *Continued.*

flange, and exceeds $1\frac{1}{2}$ inches in length and $\frac{1}{2}$ inch in width, or if it extends $\frac{1}{8}$ inch past the center of flange; broken rim, if not caused by defective casting, if the tread, measured from the flange at a point $\frac{5}{8}$ inch above tread, is less than $3\frac{3}{4}$ inches in width (see Fig. 5), or any breakage caused by unfair usage, derailment or accident.

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RULE 70. Cars equipped with forged steel or steel-tired wheels and so stenciled, if found with cast-iron or cast-steel wheels.

Cars equipped with cast-steel wheels and so stenciled, if found with cast-iron wheels.

Forged steel or steel-tired wheels may be substituted for cast-steel wheels.

RULE 71. Shelled out: wheels with defective treads on account of cracks or shelled-out spots $2\frac{1}{2}$ inches or over, or so numerous as to endanger the safety of the wheel.

Brake burn: wheels having defective treads on account of cracks or shelling out due to heating.

RULE 72. Seams $\frac{1}{2}$ inch long or over at a distance of $\frac{1}{2}$ inch or less from the throat of the flange, or seams 3 or more inches long, if such seams are within the limits of $3\frac{3}{4}$ inches, as shown in Fig. 5.

Owners
responsible.

RULE 73. Worn through chill: when the worn spot is $2\frac{1}{2}$ inches or over in length. Care must be taken to distinguish this defect from flat spots caused by sliding wheels.

RULE 74. Worn flanges, cast-iron or cast-steel wheels: wheels under cars of less than 80,000 pounds capacity, with flanges having flat vertical surfaces extending 1 inch or more from tread, or flanges 15-16 inch thick or less, gauged at a point $\frac{3}{8}$ inch above tread. Wheels under cars of 80,000 pounds capacity or over, with flanges having flat vertical surfaces extending $\frac{7}{8}$ inch or more from tread, or flanges 1 inch thick or less, gauged at a point $\frac{3}{8}$ inch above tread. (See Figs. 3 and 4.)

Worn flanges: Forged steel or steel-tired wheels: flanges having flat vertical surfaces extending 1 inch or more from tread, or flanges 15-16 inch thick or less. (See Figs. 3 and 4.)

Owners
responsible.

RULE 75. Thick flange: flange over 1 19-64 inches thick for cast-iron wheels having increased flange and tread standards of 1907 and 1909. (See Fig. 6.)

RULE 76. Tread worn hollow: if the tread is worn sufficiently hollow to render the flange or rim liable to breakage.

RULE 77. Burst: if the wheel is cracked from the wheel fit, outward, by pressure from the axle.

RULE 78. Cracked or broken flange, caused by seams, worn through chill or worn flange. See also Rules 69 and 83.

RULE 79. Broken or chipped rim, caused by defective casting, if the tread, measured from

RULE 79 — *Continued.*

the flange at a point $\frac{5}{8}$ inch above tread, is less than $3\frac{3}{4}$ inches in width. (See Fig. 5.) See also Rules 69 and 83.

RULE 80. Cracked tread, cracked plate, one or more cracked brackets, or broken in pieces under fair usage. See also Rule 69.

Forged steel or steel-tired wheels loose, broken or cracked hubs, plates, bolts, retaining ring or tire under fair usage.

RULE 81. Wheels loose or out of gauge. (See Fig. 7 for wheels cast prior to the M. C. B. Standard tread and flange adopted in 1907, and Fig. 8 for wheels cast after January 1, 1908.)

Owners
responsible.

RULE 82. Chipped flange: if chip is on the opposite side from throat of flange and exceeds $1\frac{1}{2}$ inches in length and $\frac{1}{2}$ inch in width, or if it extends $\frac{1}{8}$ inch past the center of flange.

RULE 83. The determination of flat spots, worn flanges and chipped treads shall be made by a gauge, as shown in Fig. 1, and its application to defective wheels, as shown in Figs. 2, 3, 4 and 5. The determination of thick flanges for all wheels cast after January 1, 1908, shall be made by a gauge shown in Fig. 6.

RULE 83—Continued.

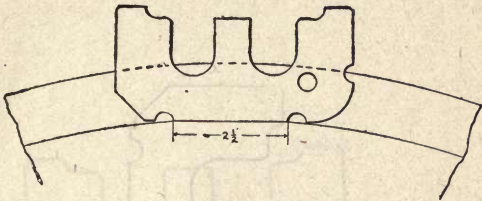
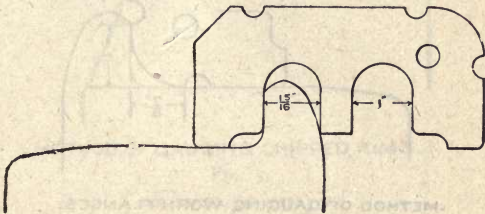
METHOD OF GAUGING SHELLED
AND FLAT SPOTS.

FIG. 2.

SEE RULES 68 AND 71.



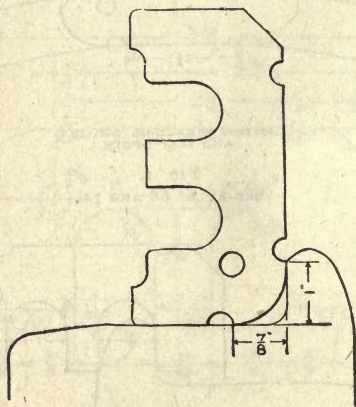
METHOD OF GAUGING WORN FLANGES.

FIG. 3.

SEE RULE 74.

For cast-iron or cast-steel wheels under cars of less than 80,000 pounds capacity, and forged-steel or steel-tired wheels with flanges 15-16 inch thick or less; cast-iron or cast-steel wheels under cars of 80,000 pounds capacity or over, with flanges 1 inch thick or less.

RULE 83—Continued.

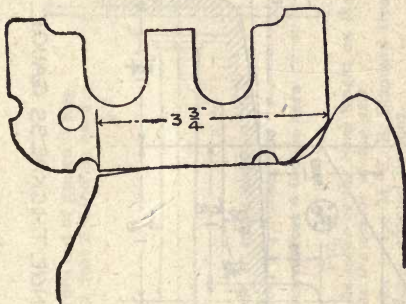


METHOD OF GAUING WORN FLANGES.

FIG. 4.

SEE RULE 74.

For cast-iron or cast-steel wheels under cars of less than 80,000 pounds capacity, and forged-steel or steel-tired wheels 1 inch or more from tread; for cast-iron or cast-steel wheels under cars of 80,000 pounds capacity or over, $\frac{7}{8}$ inch or more from tread.

RULE 83—*Continued.*

METHOD OF GAUGING CHIPPED RIMS.

FIG. 5.

SEE RULES 69 AND 79.

RULE 83—Continued.

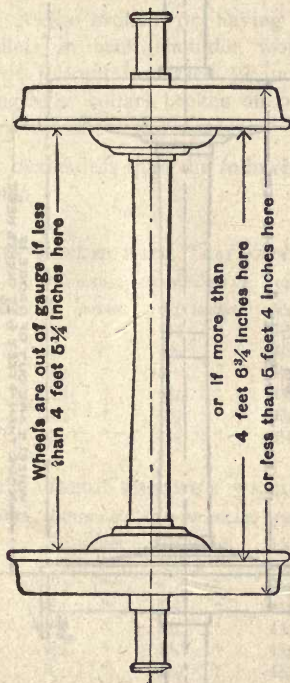


FIG. 7.
 Measurements to be made at the same height on the wheels as the center of the axle.
 For wheels cast prior to the M. C. B. Standard tread and flange adopted in 1907.

RULE 83—Continued.

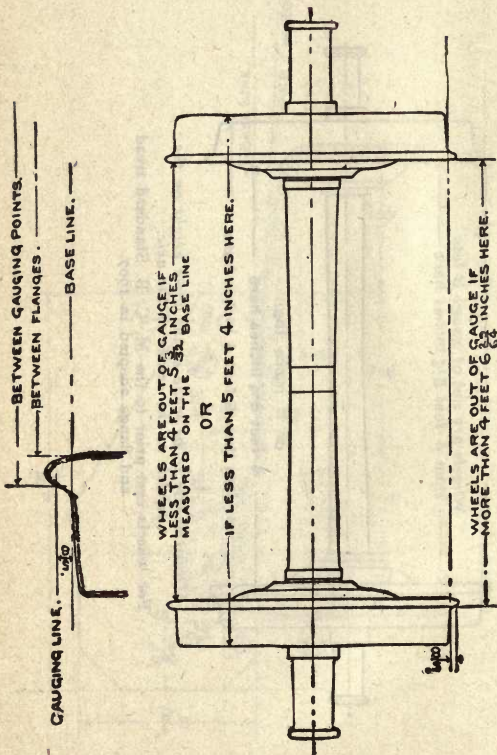


FIG. 8.

Measurements to be made at the same height on the wheels as the center of the axle.

For wheels cast after January 1, 1908.

AXLES.

RULE 84. Cut journals, axle bent or axle rendered unsafe by unfair usage, derailment or accident.

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RULE 85. Axles broken or having seamy journals, fillets in back shoulder worn out, the length of journal increased $\frac{1}{2}$ inch over standard length, or collars broken off or worn to $\frac{1}{4}$ inch or less under fair usage.

RULE 86. Axles less than the following prescribed limits:

FOR CARS MARKED WITH "CAPACITY."

CAPACITY OF CAR.	JOURNAL.	WHEEL SEAT.	CENTER.
100,000	5 inches.	$6\frac{3}{4}$ inches.	$5\frac{7}{8}$ inches.
80,000	$4\frac{1}{2}$ "	$6\frac{1}{4}$ "	$5\frac{5}{8}$ "
70,000	4 "	$5\frac{5}{8}$ "	$4\frac{7}{8}$ "
60,000	$3\frac{3}{4}$ "	5 "	$4\frac{3}{8}$ "
50,000	$3\frac{1}{2}$ "	$4\frac{3}{4}$ "	$4\frac{1}{8}$ "
40,000	$3\frac{1}{4}$ "	$4\frac{5}{8}$ "	$3\frac{7}{8}$ "
30,000	3 "	$4\frac{1}{4}$ "	$3\frac{1}{2}$ "

Owners
responsible.

FOR CARS MARKED "MAXIMUM WEIGHT."

MAXIMUM WEIGHT.	JOURNAL.	WHEEL SEAT.	CENTER.
161,000	5 inches.	$6\frac{3}{4}$ inches.	$5\frac{7}{8}$ inches.
132,000	$4\frac{1}{2}$ "	$6\frac{1}{4}$ "	$5\frac{3}{8}$ "
112,000	$4\frac{1}{4}$ "	6 "	$5\frac{1}{4}$ "
95,000	$3\frac{3}{4}$ "	$5\frac{1}{2}$ "	$4\frac{3}{4}$ "
79,000	$3\frac{1}{2}$ "	$5\frac{1}{4}$ "	$4\frac{5}{8}$ "
66,000	$3\frac{1}{4}$ "	$4\frac{7}{8}$ "	$4\frac{1}{4}$ "
58,000	3 "	$4\frac{3}{4}$ "	$4\frac{1}{8}$ "

RULE 86 — *Continued.*

TABLE I.

FOR TANK CARS MARKED LIMIT WEIGHT I.

LIMIT WEIGHT I.

IN POUNDS.	JOURNAL.	WHEEL SEAT.	CENTER.
161,000	5 inches.	6 $\frac{3}{4}$ inches.	5 $\frac{7}{8}$ inches.
132,000	4 $\frac{1}{2}$ "	6 $\frac{1}{4}$ "	5 $\frac{5}{16}$ "
112,000	4 "	5 $\frac{5}{8}$ "	4 $\frac{7}{8}$ "
95,000	3 $\frac{3}{4}$ "	5 "	4 $\frac{3}{8}$ "
79,000	3 $\frac{1}{2}$ "	4 $\frac{3}{4}$ "	4 $\frac{1}{8}$ "
66,000	3 $\frac{1}{4}$ "	4 $\frac{5}{8}$ "	3 $\frac{7}{8}$ "
58,000	3 "	4 $\frac{1}{4}$ "	3 $\frac{1}{2}$ "

TABLE II.

FOR TANK CARS MARKED LIMIT WEIGHT II.

LIMIT WEIGHT II.

IN POUNDS.	JOURNAL.	WHEEL SEAT	CENTER.
161,000	5 inches.	6 $\frac{3}{4}$ inches.	5 $\frac{7}{8}$ inches.
132,000	4 $\frac{1}{2}$ "	6 $\frac{1}{4}$ "	5 $\frac{3}{8}$ "
112,000	4 $\frac{1}{4}$ "	6 "	5 $\frac{1}{4}$ "
95,000	3 $\frac{3}{4}$ "	5 $\frac{1}{2}$ "	4 $\frac{3}{4}$ "
79,000	3 $\frac{1}{2}$ "	5 $\frac{1}{4}$ "	4 $\frac{5}{8}$ "
66,000	3 $\frac{1}{4}$ "	4 $\frac{7}{8}$ "	4 $\frac{1}{4}$ "
58,000	3 "	4 $\frac{3}{4}$ "	4 $\frac{1}{8}$ "

Owners
responsible.

All cars, except tank cars, to have their light weight and capacity or their light weight and maximum weight stenciled on them.

All tank cars to have Limit Weight I or Limit Weight II stenciled on them.

IMPROPER REPAIRS.

RULE 87. Any company making improper repairs is solely responsible to the owners, with the exception of the cases provided for in Rules 34, 35, 36, 58, 66 and 70.

RULE 88. The company making such improper repairs shall place upon the car, at the

Company
making
repairs
responsible.

RULE 88 — *Continued.*

time and place the work is done, an M. C. B. defect card, which card must state the wrong material used.

RULE 89. When improper repairs of owner's defects have been made and bill rendered, the owner may counter-bill against the company making the wrong repairs for the cost of changing the car to the original standard, or to the requirements of Rules 17 to 27, inclusive, and 29 to 31, inclusive, if the work is done.

Company
making
repairs
responsible.

RULE 90. When improper repairs of defects for which owners are not responsible are made, the owner may make bill against the company making the improper repairs for the cost of changing the car to the original standard, or to the requirements of Rules 17 to 27, inclusive, and 29 to 31, inclusive, if the work is done.

INSTRUCTIONS FOR BILLING.

RULE 91. Bills may be rendered for work done under Rule 16, except in cases where owners are not responsible and the car bears no defect card covering the defects repaired, stating upon the bill the date and place where the repairs were made; the billing repair card or defect card to accompany the bill.

NOTE.—The following rules of the Association of American Railway Accounting Officers should be observed when rendering or correcting bills:

Bills shall not be rendered for amounts less than 25 cents in aggregate, but charges for

RULE 91 — *Continued.*

items less than 25 cents may be held until they amount to that sum, provided said aggregate is rendered within 60 days. No bill shall be returned for correction on account of error for less than 100 cents in aggregate of bill, but said bill shall be passed for payment at once, and the alleged error brought to the attention of the road rendering the same within sixty days from date of bill. The receiving road shall at once issue a letter of authority for counter-bill to cover the acknowledged error, said letter to be attached to the bill as authority.

No bills shall be returned for correction on account of wrong car numbers, but road rendering bill should be communicated with by letter, and if, after investigation, it is found to be a fact that wrong car number has been given, correct number shall be furnished or credit covering amount of charge allowed on next month's bill.

When necessary to return bills for correction, all defect cards and billing repair cards should be detached, except those covering repairs to cars, the charge for which there may be some question as to its correctness.

RULE 92. In rendering bills, cars shall be treated as belonging to companies or individuals whose name or initials they bear, except in case of Line Cars where the equipment list of the general officers of the Line designates a party to make settlement.

RULE 93. All companies rendering bill should consolidate all charges against any one company into one monthly bill.

RULE 94. For repairs made on defect cards, the card must accompany the bill as voucher for the work done, but no bill shall be rendered for repairs which have not been made.

RULE 95. Bills may be rendered against car owners for the labor only of replacing the following material when lost on the line of the company making the repairs, viz.:

Brake beams, including shoes, heads, jaws, key bolts, brake pins and hangers, when lost with the brake beam.

Brake levers, lever guides, top and bottom brake rods, whether or not they are lost with the brake beam.

Couplers, including yokes, springs and followers, when lost with the coupler.

RULE 96. In making bills under these rules, the information necessary should be embodied on the forms shown on page 86, whether the same is made as a bill or a statement to accompany a bill.

In exchanging wheels and axles under foreign cars, reports on repair cards, of M. C. B. Standard size, embodying all information required by the statement shown on page 85, will be accepted.

RULE 97. Bills or statements for wheel and axle work must make specific mention of each wheel and axle removed and applied. If no

RULE 97 — *Continued.*

marks are found on wheels or axles removed, a notation to that effect must be made.

RULE 98. Bills rendered for wheels and axles shall be in accordance with the following schedule of prices for material, with the proper debits and credits:

	New.	Second-hand.	Scrap.
One 36-in. cast-iron wheel.	\$10.50	\$7.75	\$5.25
One 33-in. cast-iron wheel.	9.00	7.00	4.75
One 33-in. forged or rolled steel wheel	} 23.00	.....	5.00
One axle, 100,000 lbs	21.50	11.75	7.75
One axle, 80,000 lbs	17.75	10.00	6.50
One axle, 60,000 lbs	14.00	7.75	5.25
One axle, 50,000 lbs. (or under)	} 11.50	6.25	4.25

and with an additional charge for all labor for each pair of wheels and axles removed from all archbar trucks of \$1.75, and from all solid pedestal trucks of \$2.00. If new wheels and axles are substituted for secondhand wheels and axles, proper charges and credits shall be allowed, although such substitution be made on account of only one loose or defective wheel, or a defective axle, with the following exceptions: In case the owner of a car removes a damaged wheel or axle, no charge shall be made for any difference in value between the parts used and those removed that are not damaged.

RULE 98—*Continued.*

Removing, turning and replacing a pair of forged steel or steel-tired wheels: \$3.25 for pedestal type of truck and \$3.00 for archbar truck.

The price for new forged or rolled steel wheels shall only apply to such wheels having treads $1\frac{3}{8}$ inches thick or over, measured from base line of tread to the condemning limit, which is $\frac{1}{4}$ inch above witness groove. For wheels having treads less than $1\frac{3}{8}$ inches thick as described, a reduction shall be made in price at the rate of 75 cents per 1-16 inch thickness (on radius) of tread.

Any loss or increase of service metal on forged or rolled steel wheels shall be credited or charged at the rate of 75 cents per 1-16 inch thickness (on radius) of tread.

IN CASE OF OWNER'S DEFECTS.

No credit will be allowed owner for loss of service metal due to turning-off wheels. Should there be a further loss of service metal, however, due to the application of other wheels, the proper credit for such additional loss must be given the owner. Any increase in the amount of service metal, due to the application of other wheels, may be charged to the owner.

DELIVERING LINE DEFECTS.

When repairs are not covered by a defect card, the proper credit for any loss of service metal must be given the owner; but no charge

RULE 98 — *Continued.*

shall be made against the owner for any increase in the amount of service metal, due to the application of other wheels.

DELIVERING LINE DEFECTS.

When the repairs are covered by the defect card of another company, charge covering such repairs shall be made against the owner of the car, the defect card and the billing repair card to be attached to the bill. The owner to render counter-bill on the authority of the defect card against the company issuing same, including an additional charge to cover the loss of service metal, on account of the defects covered by the card. Should there be an additional loss of service metal, on account of the application of other wheels, the company making the repairs shall allow the proper credit to the owner to cover such additional loss of metal. Should there be an increase in the amount of service metal, due to the application of other wheels, such increase may be charged to the owner and included in the owner's counter-bill against the company issuing the defect card, except when repairs are made by the owner.

The above provisions shall govern any loss or increase of service metal on account of the mate wheel, even if same is not defective, when both wheels are turned off to correspond.

The necessary information must be given in all cases, as provided in Rule 10.

In cases of slid-flat wheels, 1-16 inch for

RULE 98—*Continued.*

loss of service metal will be allowed for flat spots $2\frac{1}{2}$ inches long and 1-16 inch for each additional inch or fraction thereof.

RULE 99. If car owner elects on account of improper repairs to remove M. C. B. Standard axles suitable to the capacity of the car, he shall make charge for secondhand axles and allow credit for secondhand axles if they are in good order. Axles removed below the journal limit of 100,000 pounds, 80,000 pounds, 60,000 pounds and 40,000 pounds capacity, to be credited as scrap when removed.

RULE 100. Bills or statements which do not embody all the information called for by the headings of the columns may be declined until made to conform to the requirements of the rule.

In all cases of forged or rolled steel wheels, the repair card must show the actual thickness of tread before and after turning off, measured from base line of tread to the condemning limit of tread, which is $\frac{1}{4}$ inch above the witness groove; also show actual thickness of tread on other wheels applied. This information must be reported to car owners regardless of whether repairs are chargeable or not.

RULE 101. Bill for repairs made under these rules and for material furnished shall be in conformity with schedules of prices and credits for the articles enumerated below:

RULE 101 — *Continued.*

MATERIAL.	8-INCH.	10-INCH.
Air-brake Equipment:		
Air-brake hose, 1 $\frac{3}{8}$ " M. C. B. Standard, complete with fittings, applied to car, charge.	\$2.00	\$2.00
Air-brake hose, M. C. B. Standard, credit for fittings for same.	.80	.80
Angle cock, plain handle.	1.50	1.50
Angle cock, self-locking handle.	1.80	1.80
Angle cock handle, plain.	.08	.08
Angle-cock handle, self-locking.	.30	.30
Auxiliary reservoir.	2.75	6.25
Cut-out cock.	1.30	1.30
Cut-out cock handle.	.07	.07
Cylinder body.	2.00	3.50
" piston and rod.	1.00	1.50
" " follower.	.08	.25
" " packing leather.	.60	1.00
" " " expander.	.05	.06
" " release spring.	.50	.50
" non-pressure head.	.60	1.25
" gasket.	.06	.08
Gasket, air-hose coupling.	.04	.04
Pipe nipple, on end of train pipe.	.12	.12
Pressure-retaining valve, 2 position.	1.00	1.00
" " 3 "	2.25	2.25
Release valve.	.60	.60
" " handle.	.10	.10
" " rubber seat.	.02	.02
" " vent valve, complete.	.10	.10
" rod.	.10	.10
Spring cotter pins for key bolts and brake pins, each, applied.	.02	.02
Train-pipe air strainer (1 $\frac{1}{4}$ -inch).	.60	.60
Triple check-valve case.	1.00	1.00
" cylinder cap (drain cup).	.75	.75
" " " " gasket.	.40	.40
" emergency valve.	.60	.60
" " " seat.	.55	.55
" " " piston.	.50	.50
" " " rubber seat.	.05	.05
" " check valve.	.25	.25
" " " spring.	.02	.02
" " " case gasket.	.10	.10
" graduating spring.	.05	.05
" " stem.	.15	.15
" " " nut.	.20	.20
" " valve.	.05	.05
" piston and ring.	2.00	2.00
" " ring (only).	.25	.25
" slide valve.	.75	.75

RULE 101 — *Continued.*

MATERIAL.	8-INCH.	10-INCH.
Triple slide spring.....	\$0.03	\$0.03
“ valve strainer.....	.05	.05
“ “ gasket.....	.20	.20

MATERIAL.	CHARGE.	CREDIT.
Altering height of one end of car, net.....	\$1.25	.....
Bolts, nuts and forgings, finished, per lb.	.03	\$0.00 $\frac{1}{2}$
Brake shoes applied; no credit for scrap.....	.30	.....
Brake shoe, reinforced back, applied; no credit for scrap.....	.40	.....
Brake-shoe key, applied; no credit for scrap.....	.05	.....
Castings, rough iron, per lb.	.02	.00 $\frac{1}{2}$
“ “ malleable, per lb.	.03 $\frac{1}{2}$	.00 $\frac{1}{2}$
“ “ steel, per lb.	.04 $\frac{1}{2}$	.00 $\frac{3}{4}$
Chain, per lb.	.05	.01
Coupler, M. C. B., complete, new, steel, 5 by 5 shank.....	8.75	.....
Coupler, M. C. B., complete, new, steel, 5 by 7 shank.....	9.50	.....
Coupler body, one, new, steel, 5 by 5 shank.....	5.75	1.05
“ “ “ malleable, 5 by 5 shank.....	.....	.90
“ “ “ new, steel, 5 by 7 shank.....	6.50	1.15
“ “ “ malleable, 5 by 7 shank.....	.....	1.00
“ knuckle, one, new, open.....	.....	.40
“ “ “ solid.....	2.25	.45
“ “ pin, one, new.....	.25	.05
“ lock, one, new.....	0.50	0.06
Other individual malleable, wrought or steel parts, per lb.	.04	.....
Door, for end of box or stock car, wooden, each, applied; no credit for scrap.....	1.95	.....
Door, for end of box or stock car, ventilated (wooden frame with iron rods), each, applied; no credit for scrap.....	3.30	.....
Door, for side of box or stock car, wooden, each, applied; no credit for scrap.....	3.65	.....
Door, for side of box or stock car; ventilated (wooden frame with iron rods), each, applied; no credit for scrap.....	5.50	.....
Door, for side of carriage, automobile or furniture car, wooden, each, applied; no credit for scrap.....	5.00	.....
Door, for side of stock car, with iron rods, each, applied; no credit for scrap.....	4.40	.....
Door, for roof of coke car, wooden, each, applied; no credit for scrap.....	2.45	.....
Door, for roof of stock car, wooden, each, applied; no credit for scrap.....	.85	.....

RULE 101 — *Continued.*

MATERIAL.	CHARGE.	CREDIT.
Half door, for side of box or stock car, each, applied; no credit for scrap.....	\$2.50	.....
Half door, for end of furniture or carriage car, each, applied; no credit for scrap....	3.00	.....
Handhold, one, applied, net	.40	.....
Hatch cover, for roof of refrigerator car, wooden, each, applied; no credit for scrap.	1.50	.....
Hatch plug, for refrigerator car, wooden, each, applied; no credit for scrap.....	1.50	.....
Iron, galvanized, per lb.	.04	.....
Journal bearings, brass or bronze, lined or unlined, per lb., applied.....	.18	\$0.13
Journal bearings, filled brass or bronze shell, per lb., applied.....	.14	.10
Journal bearings; weights to be charged and credited as follows.	lbs.	lbs.
7" long and over, but not 8" long	10	6
8" " " " " " 9" "	13	8
9" " " " " " 10" "	20	12
10" " " " " "	25	15
Journal bearings, cast-steel or malleable-iron back, credit for scrap, per lb.....	.....	.04
Labor, per hour.....	.24	.....
Lumber—yellow, white and Norway pine, poplar, oak, hickory and elm, dressed and framed, per ft. B. M. required to make the part.	.03½	.....
Nails, per lb.	.03	.....
Paint, lead, freight car, mixed, per lb.....	.15	.....
" mineral, freight car, mixed, per lb....	.06	.....
Pipe, ¾-inch, per ft.....	.03	.....
" 1-inch, per ft.	.05	.....
" 1¼-inch, per ft.....	.07	.....
Steel for springs, rough, per lb.	.05	.00¾
" helical springs, per lb.	.03½	.01
" pressed and flanged, per lb.	.04½	.00½
" plate and structural, per lb.....	.03	.00½

RULE 102. Not more than one pound of mineral paint can be charged for 15 square feet of surface covered, and not more than one pound of lead paint for 12 square feet of surface covered. No charge to be made for lettering.

RULE 103. Whenever scrap credits are allowable the weights of scrap credited shall be

RULE 103—*Continued.*

equal to the weights of the new metal applied, except as otherwise provided in the rules, and except in the case of scrap M. C. B. couplers, and parts of same, and material applied on defect cards, in which cases the weight and kind of metal removed shall be credited.

RULE 104. When M. C. B. coupler parts or metal brake beams are replaced, good second-hand material may be used, but they must be charged at seventy-five per cent of the prices when new. The credits for coupler parts released from service in good condition must be seventy-five per cent of the prices when new, and similarly the credits for metal brake beams must be fifty per cent of the prices when new.

In the case of defective couplers, when another make is applied, credits shall be confined to the body, lock, knuckle and knuckle pin.

RULE 105. Manufactured articles not included in Rules 98 and 101 must be charged at current market prices, without freight charges.

RULE 106. No percentage to be added to either material or labor.

RULE 107. The following table shows the number of hours which may be charged for labor in doing the various items of work enumerated, which includes all work necessary to complete each item of repairs, except in so far as labor is already included in charges for materials:

RULE 107 — *Continued.*

	ORDINARY CARS.		REFRIGERATOR CARS.	
	Hours.	Charge for Labor.	Hours.	Charge for Labor.
Advertisements, temporary, tacked on cars, removing, per car.....		\$0.50		\$0.50
Advertisements, temporary, pasted, glued or varnished on cars, removing, per car.....		1.00		1.00
American continuous draft rods, one rod, welding.....	2	.48	2	.48
Arch bars, 1 or 2, replaced on same side of truck.....	3	.72	3	.72
Arch bar, blacksmith labor, each, repairing..	1½	.36	1½	.36
Axle, bent, straightening.....	4	.96	4	.96
Bolster, body, composite, one, replaced.....	10	2.40	12	2.88
Bolster, body, plain metal or wood, one, replaced.....	8	1.92	10	2.40
Bolster, body, metal, one, replaced when draft timbers extend through same.....	16	3.84	18	4.32
Bolster, body, plain metal or wood, one, replaced when one or more defective sills are replaced.....	2	.48	2	.48
Bolster, composite, one, replaced when one or more defective sills are replaced.....	4	.96	4	.96
Bolster, truck, one, replaced.....	10	2.40	10	2.40
Bolster, truck, one, and one spring plank in same truck, replaced.....	12	2.88	12	2.88
Braces, side or end, one, renewed.....	3	.72	6	1.44
Braces, side or end, each, renewed, when associated with the renewal of posts.....	1½	.36	3	.72
Brake beam, one, replaced, including attachments and connections.....	2	.48	2	.48
Brake beam, one, metal, blacksmith labor repairing.....	2	.48	2	.48
Brake beam, wooden truss, repairing.....	1	.24	1	.24
Brake connection rod or lever, one or both applied.....	½	.12	½	.12
Brake connection repaired and replaced.....	1	.24	1	.24
Brake hanger, repaired and replaced.....	1	.24	1	.24
Brake shoe, applied on authority of defect card, when brake beam is not replaced....	½	.12	½	.12
Buffer block, one, cast-iron, replacing.....	1	.24	1	.24
Bolts—				
Carrier iron bolts, three or less, at one end of car, applied.....	2	.48	2	.48
Carrier iron bolts, all at one end of car, applied.	3	.72	3	.72

RULE 107 — *Continued.*

	ORDINARY CARS.		REFRIGERATOR CARS.	
	Hours.	Charge for Labor.	Hours.	Charge for Labor.
Carrier iron bolts, 6 inches or less, each.	$\frac{1}{4}$	\$0.06	$\frac{1}{4}$	\$0.06
Center-plate bolts, where same do not pass through draft timber, one or more, or all at same end.	3	.72	3	.72
Center-plate bolt or bolts and center plate, replacing, on one end of car.	3	.72	3	.72
NOTE.—If center plate bolt or bolts pass through draft timbers it must be termed center plate bolt and charged three hours.				
Column bolts, one or more, replaced in same truck.	2	.48	2	.48
Coupler stop bolts, lug strap bolts or draft timber cross-tie bolts, 5 or less, at same end of car, when coupler is not replaced, each. .	$\frac{1}{2}$	.12	$\frac{1}{2}$	.12
Coupler stop bolts, lug strap bolts or draft timber cross-tie bolts, 6 or more, at same end of car, when coupler is not replaced. . .	3	.72	3	.72
Draft timber bolts, or carrier iron bolts, either or both, three or less, at one end of car, replacing.	2	.48	2	.48
Draft timber bolts, or carrier iron bolts, either or both, four or more, at one end of car, replacing.	3	.72	3	.72
Journal box bolt, one or two, replaced, same box.	1	.24	1	.24
Carlin, one, replaced.	3	.72	.....	.....
Column castings, one or both, replaced on same side of truck.	3	.72	3	.72
Column castings, two, replaced on opposite sides of same trucks.	5	1.20	5	1.20
Center pin (head), applied, empty car.	$\frac{1}{2}$	.12	$\frac{1}{2}$	.12
Center pin (head), applied, loaded car.	3	.72	3	.72
Center pin (head), applied, empty car, and putting same end on center.	$1\frac{1}{2}$	.36	$1\frac{1}{2}$	.36
Center pin (head), applied, loaded car, and putting same end on center.	5	1.20	5	1.20
Center pin (key), applied, empty car, including placing the same end on center, if necessary. .	$1\frac{1}{2}$	.36	$1\frac{1}{2}$	.36
Center pin (key), applied, loaded car, including placing same end on center, if necessary. .	$2\frac{1}{2}$	.60	$2\frac{1}{2}$	.60
Center plates, one or two, at same end, replacing.	3	.72	3	.72
Corner iron, one, replaced.	1	.24	1	.24

RULE 107-- *Continued.*

	ORDINARY CARS.		REFRIGERATOR CARS.	
	Hours.	Charge for Labor.	Hours.	Charge for Labor.
Coupler, with stem attachments, coupler springs, one or more follower plates, American continuous draft key, American continuous draft rods, one or more coupler stops, renewing or replacing any or all, at same end of car, at same time.	3	\$0.72	3	\$0.72
Coupler, with pocket attachments, coupler spring, one or more follower plates, one or more coupler stops, coupler pocket, coupler pocket rivets, renewing or replacing any or all, at same end of car at same time.	4	.96	4	.96
(This does not include coupler stops, riveted, which should be charged for on a per rivet basis in addition to the cost of removing and replacing coupler when it is necessary to do the riveting.)				
Cross-tie timber, one, replaced.	3	.72	3	.72
Cross-tie timber, one, replaced when one or more defective sills are replaced.	1	.24	1	.24
Dead block, wooden, replacing at one end of car.	3	.72	3	.72
Door, end, old, rehangng.	$\frac{1}{2}$	.12	.....	.....
Door, side, old, rehangng.	1	.24	1	.24
Draft timber, one, replaced.	7	1.68	7	1.68
Draft timbers, two, on same end, replaced.	10	2.40	11	2.64
Draft timber, one, extending beyond body bolster, renewed.	10	2.40	10	2.40
Draft timbers, two, extending beyond body bolster, renewed.	13	3.12	14	3.36
Draft timber, one, renewed, when its center sill is renewed or spliced at same end of car. .	2	.48	2	.48
Draft timber, one, renewed, when its opposite center sill at same end of car is renewed or spliced.	3	.72	3	.72
End plank, one, renewed on gondola car.				
Without angle irons.	2	.48	.....	.....
With angle irons, bolted.	3	.72	.....	.....
With angle iron, riveted.	5	1.20	.....	.....
End planks, two, renewed on same end:				
Without angle irons.	$2\frac{1}{2}$	.60	.....	.....
With angle irons, bolted.	$3\frac{1}{2}$	.84	.....	.....
With angle irons, riveted.	$5\frac{1}{2}$	1.32	.....	.....
End planks, three, renewed on same end:				
Without angle irons.	3	.72	.....	.....

RULE 107 — *Continued.*

	ORDINARY CARS.		REFRIGERATOR CARS.	
	Hours.	Charge for Labor.	Hours.	Charge for Labor.
With angle irons, bolted.....	4	\$0.96	.....	.....
With angle irons, riveted.....	6	1.44	.....	.....
End planks, four, renewed on same end:				
Without angle irons.....	3½	.84	.....	.....
With angle irons, bolted.....	4½	1.08	.....	.....
With angle irons, riveted.....	6½	1.56	.....	.....
End plate, one, replaced.....	12	2.88	14	\$3.36
Handhold, removed and straightened, one..	½	.12	½	.12
Handholds, straightened on car, one or two.	¼	.06	¼	.06
Journal box, one, replaced.....	2	.48	2	.48
Journal boxes, two, on same axle, replaced....	3	.72	3	.72
Journal box, one or two, replaced on same axle, solid pedestal truck.....	4	.96	4	.96
Journal box, three or four, replaced, same truck, solid pedestal truck.....	5	1.20	5	1.20
Journals, truing up one or two, on same axle..	2	.48	2	.48
Nuts, only, ¾ inch and under, replacing four or less.....	¼	.06	¼	.06
Nuts, only, 1 inch to 1½, inclusive, replacing one or two.....	¼	.06	¼	.06
Nuts, only, 1½ inch and over, replacing one..	¼	.06	¼	.06
Platform plank, one, replaced.....	1	.24	1	.24
Posts, corner, door, end or side, each, renewed on empty car.....	3	.72	6	1.44
Posts, corner, door, end or side, each, renewed, where associated with renewal of side sill or inside end sill, side or end plate.....	2	.48	3½	.84
Posts, corner, door, end or side, one renewed on loaded car.....	4	.96	6	1.44
Releasing rod for M. C. B. coupler, one, replaced.....	½	.12	½	.12
Roof boards, single, including removing and replacing running board, per lineal foot....	.....	.07	.....	.07
Roof boards, double board roof, including removing and replacing running board, per lineal foot.....	.....	.09	.....	.09
Running board, complete, applied.....	6	1.44	6	1.44
Spring plank, one, replaced.....	10	2.40	10	2.40
Side plank, one, renewed on gondola car:				
Without angle irons.....	4	.96	.....	.....
With angle irons, bolted.....	7	1.68	.....	.....
With angle irons, riveted.....	8	1.92	.....	.....
Side planks, two, renewed on same side:				
Without angle irons.....	5½	1.32	.....	.....

RULE 107—Continued.

	ORDINARY CARS.		REFRIGERATOR CARS.	
	Hours.	Charge for Labor.	Hours.	Charge for Labor.
Side planks, two, with angle irons, bolted.....	8	\$ 1.92	.....	.....
With angle irons, riveted.....	9	2.16	.....	.....
Side planks, three, renewed on same side:				
Without angle irons.....	7	1.68	.....	.....
With angle irons, bolted.....	9	2.16	.....	.....
With angle irons, riveted.....	10	2.40	.....	.....
Side planks, four, renewed on same side:				
Without angle irons.....	8½	2.04	.....	.....
With angle irons, bolted.....	10	2.40	.....	.....
With angle irons, riveted.....	11	2.64	.....	.....
Side plate, one, applied.....	25	6.00	35	\$ 8.40
Side plate, one, spliced.....	8	1.92	15	3.60
Siding, removed and replaced, per lineal foot.....		.15	.....	.15
Siding, removed and replaced, per lineal foot, where nails are set and holes puttied.....			.....	.20
SILLS.				
1 center sill, spliced, per end.....	16	3.84	20	4.80
2 center sills, spliced, same end.....	22	5.28	26	6.24
1 center sill, renewed.....	35	8.40	47	11.28
2 center sills, renewed.....	41	9.84	68	16.32
1 end sill under siding, renewed.....	15	3.60	17	4.08
1 end sill outside siding, renewed.....	7	1.68	7	1.68
1 end sill under siding, renewed where one or more defective sills are renewed.....	3	.72	4	.96
1 end sill under siding, renewed, where one or more defective sills are spliced.....	10	2.40	11	2.64
1 end sill outside siding, renewed when one or more defective sills have been renewed....	2	.48	2	.48
1 end sill, outside siding, renewed, when one or more defective sills have been spliced.....	3	.72	3	.72
1 intermediate sill, renewed.....	32	7.68	43	10.32
2 " " sills, ".....	38	9.12	59	14.16
3 " " " ".....	44	10.56	69	16.56
4 " " " ".....	50	12.00	79	18.96
1 " " sill and 1 center sill, renewed.....	41	9.84	63	15.12
1 " " " 2 " sills ".....	47	11.28	84	20.16
2 " " " 1 " sill ".....	46	11.04	73	17.52
2 " " " 2 " sills ".....	53	12.72	94	22.56
3 " " " 1 " sill ".....	51	12.24	83	19.92
3 " " " 2 " sills ".....	63	15.12	104	24.96
4 " " " 1 " sill ".....	63	15.12	93	22.32
4 " " " 2 " sills ".....	68	16.32	114	27.36
1 " " sill, spliced.....	11	2.64	14	3.36

RULE 107—Continued.

	ORDINARY CARS.		REFRIGERATOR CARS.	
	Hours.	Charge for Labor.	Hours.	Charge for Labor.
1 side sill and 1 center sill, renewed	51	\$12.24	68	\$16.32
1 " " 2 " sills, "	56	13.44	89	21.36
2 " sills " 1 " sill "	71	17.04	89	21.36
2 " " 2 " sills "	74	17.76	110	26.40
1 " sill, spliced.....	12	2.88	15	3.60
1 " " renewed.	25	6.00	44	10.56
2 " sills, renewed	40	9.60	65	15.60
1 side sill and 1 intermediate sill, renewed. ...	47	11.28	63	15.12
1 " " 2 " sills, "	53	12.72	73	17.52
1 " " 3 " " "	59	14.16	83	19.92
1 " " 4 " " "	65	15.60	93	22.32
2 " " 1 " sill "	61	14.64	84	20.16
2 " " 2 " sills "	67	16.08	94	22.56
2 " " 3 " " "	73	17.52	104	24.96
2 " " 4 " " "	79	18.96	114	27.36
1 " 1 intermediate and 1 center sill, renewed	56	13.44	84	20.16
2 " 1 " " 1 " " "	77	18.48	105	25.20
1 " 2 " " 1 " " "	61	14.64	94	22.56
2 " 2 " " 1 " " "	79	18.96	115	27.60
1 " 3 " " 1 " " "	66	15.84	104	24.96
2 " 3 " " 1 " " "	84	20.16	125	30.00
1 " 4 " " 1 " " "	71	17.04	114	27.36
2 " 4 " " 1 " " "	89	21.36	135	32.40
1 " 1 " " 2 " sills "	61	14.64	105	25.20
2 side 1 intermediate and 2 center sills, renewed	79	18.96	126	30.24
1 " 2 " " 2 " " "	66	15.84	115	27.60
1 " 3 " " 2 " " "	72	17.28	125	30.00
1 " 4 " " 2 " " "	77	18.48	135	32.40
2 " 2 " " 2 " " "	84	20.16	136	32.64
2 " 3 " " 2 " " "	89	21.36	146	35.04
2 " 4 " " 2 " " "	94	22.56	156	37.44
Each side or intermediate sill, spliced, when longitudinal sills have to be renewed, or when other sills are spliced at same end.	3	.72	3	.72
1 center sill, spliced, when intermediate or side sills have to be renewed.	8	1.92	9	2.16
1 center sill, spliced, when other center sill has to be renewed.	6	1.44	7	1.68
Stakes, end or side, on gondola cars, applied, each.	1½	.36	.....	.....
Truck springs, one or all, in same truck, replacing.	2	.48	2	.48
Truck transom, one, wood, replaced	10	2.40	10	2.40
Truck transoms, two, wood, replaced in same truck.	12	2.88	12	2.88

RULE 107 — *Continued.*

	ORDINARY CARS.		REFRIGERATOR CARS.	
	Hours.	Charge for Labor.	Hours.	Charge for Labor.
Weighing and re-stenciling stock cars, \$1 net.				
Weighing and re-stenciling other cars, 75 cents net.				
When necessary to remove load to replace body center plate, bolt or bolts, one or two draft timbers, or draft timber bolts, at one end of car	3	\$0.72	3	\$0 72

REPAIRS OF STEEL OR STEEL PARTS OF COMPOSITE CARS.

All rivets $\frac{1}{2}$ inch diameter or over, 12 cents net per rivet, which covers removal and replacing of rivets, including removing, fitting, punching or drilling holes when applying patches or splicing and replacing damaged parts, not to include straightening.

All rivets $\frac{1}{4}$ inch diameter and less than $\frac{1}{2}$ inch diameter, 7 cents net per rivet, which covers removal and replacing of rivets, including removing, fitting, punching or drilling holes when applying patches or splices and replacing damaged parts, not to include straightening.

Straightening or repairing parts removed from damaged car, 60 cents per 100 pounds.

Straightening or repairing parts in place on damaged car; also any part that requires straightening, repairing or renewing, not included on rivet basis, 24 cents per hour.

In making repairs to cars on a rivet basis, the cost of removing and replacing fixtures not secured by rivets, but necessarily removed in order to repair or renew adjacent defective parts, should be in addition to the rivet basis; rules covering wood-car repairs to govern.

RULE 108. No charge to be made for labor of replacing or applying M. C. B. knuckles, knuckle locks, knuckle pins, clevises, clevis pins, lift chains, brake shoes or brake-shoe keys, or applying side and end doors, except on the authority of a defect card.

No charge to be made for adjusting brakes.

RULE 109. When it is necessary to apply an M. C. B. coupler complete, on account of a broken or missing knuckle or lock, the usual

RULE 109 — *Continued.*

labor charge for replacing a coupler can be made.

When one or more carrier iron bolts over six inches long are replaced, where pocket coupler at same end of car is removed and replaced, the regular labor charge should be reduced one hour, except when one or both draft timbers are replaced.

RULE 110. No additional labor to be charged for:

Applying end sheathing when end plate or end sill under sheathing is renewed or replaced, also side sheathing when side sill or side plate is removed or replaced.

Applying center pins or friction rollers or putting car on center when center plates or center-plate bolts are applied at same end.

Applying dead block or platform plank when end sill is applied at same end.

Applying coupler when draft timber, one or both, is applied at the same end.

Applying brake hangers when brake beam is applied.

RULE 111. The following table shows the labor charges allowable for air-brake repair work. The letters "R. & R." mean "removed and replaced":

	Cents.
Air hose, R. & R.....	3
Angle cock, R. & R.....	7
Angle cock handle, R. & R.....	4
Angle cock, grinding in, R. & R.....	28

RULE III — *Continued.*

	Cents.
Check valve case, spring, gasket, or all, R. & R.	10

DETAILS.	Cents.
Disconnecting union	3
Check valve case (two cap screws)...	2
Emergency valve seat.....	5
	—
Total	10

Coupler dummy, R. & R. (1 lag screw)....	1
Cut-out cock, R. & R.....	9

DETAILS.	Cents.
1 pipe union disconnected.....	3
2 pipe connections	6
	—
Total	9

Cut-out cock, grinding in, R. & R.....	30
Cut-out cock handle, R. & R.....	4
Cylinder, R. & R.....	30

DETAILS.	Cents.
Push rod (1 connecting pin).....	3
Clamping piston (1 cap screw).....	2
Cylinder head, R. & R. (4 nuts, ½ inch, 1 cent each).....	4
Disconnecting cylinder from reservoir (7 nuts, ½ inch, 1 cent each)...	7
Reclamping cylinder piston (1 cap screw)	2
Removing cylinder from car (6 nuts, ⅝ inch, 2 cents each).....	12
	—
Total	30

Cylinder and reservoir, R. & R.....	41
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RULE III — *Continued.*

DETAILS.	Cents.
Removing push rod (1 connecting pin)	3
Removing cylinder head (4 nuts, $\frac{1}{2}$ inch, 1 cent each).....	4
Removing cylinder from car (6 nuts, $\frac{5}{8}$ inch, 2 cents each).....	12
Removing reservoir from car (2 nuts, $\frac{5}{8}$ inch, 2 cents each).....	4
Removing release rods (2 spring cot- ters)	4
Removing release valve.....	2
Removing two plugs.....	2
Removing triple (2 nuts, $\frac{5}{8}$ inch, 2 cents each)	4
Disconnecting train pipe union.....	3
Disconnecting retaining pipe unions..	3
Total	41

Cents.

Cylinder and reservoir, tightening when loose (8 nuts, 1 cent each).....	8
Cylinder cleaned, oiled, tested and stenciled, including obliterating old stencil marks..	33

DETAILS.	Cents.
Removing push rod (1 connecting pin)	3
Clamping piston (1 cap screw).....	2
Removing cylinder head (4 nuts, $\frac{1}{2}$ inch, 1 cent each).....	4
Cleaning, testing and stenciling.....	24
Total	33

Cylinder release spring, R. & R.....	11
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DETAILS.	Cents.
Removing push rod (1 connecting pin)	3
Clamping cylinder piston (1 cap screw)	2
Removing cylinder head (4 nuts, $\frac{1}{2}$ inch, 1 cent each).....	4
Reclamping cylinder head (1 cap screw)	2
Total	11

Cylinder gasket, R. & R.....	25
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RULE III — *Continued.*

DETAILS.	Cents.
Disconnecting triple union.....	3
Disconnecting retaining pipe union...	3
Disconnecting reservoir block (2 nuts, 5/8 inch, 2 cents each).....	4
Disconnecting reservoir from cylinder (7 nuts, 1/2 inch, 1 cent each)...	7
Removing push rod (1 connecting pin)	3
Clamping cylinder piston.....	1
Removing release rods (2 spring cot- ters)	4
Total	25

Cents.

Emergency check valve, grinding in..... 10

Emergency valve piston, R. & R..... 10

DETAILS.	Cents.
Disconnecting union	3
Removing check valve case (2 cap screws)	2
Removing emergency valve seat.....	5
Total	10

Emergency valve seat, R. & R. (see E. V.
piston) 10

Emergency valve, rubber seat, R. & R..... 10

DETAILS.	Cents.
Disconnecting union	3
Removing check valve case (2 cap screws)	2
Removing riveted pin.....	4
Removing emergency valve nut.....	1
Total	10

Cylinder piston packing, R. & R..... 13

DETAILS.	Cents.
Removing push rod (1 connecting pin)	3
Clamping cylinder piston (1 cap screw)	2
Removing cylinder head (4 nuts, 1/2 inch, 1 cent each).....	4
Removing leather packing (4 nuts, 1/2 inch, 1 cent each).....	4
Total	13

RULE III — *Continued.*

	Cents.
Cylinder piston, R. & R.....	15

DETAILS.	Cents.
Removing push rod (1 connecting pin)	3
Clamping cylinder piston (1 cap screw)	2
Removing cylinder head (4 nuts, $\frac{1}{2}$ inch, 1 cent each).....	4
Removing leather packing (4 nuts, $\frac{1}{2}$ inch, 1 cent each).....	4
Reclamping cylinder piston (1 cap screw)	2
Total	15

Dirt collectors in branch pipe, cleaned, drained and stenciled.....	5
Gasket, coupling, R. & R.....	2
Graduating nut, stem, spring, or all, R. & R.	2
Oil plugs, R. & R., each.....	2
Packing leather expander, R. & R. (see cylinder piston)	7
Pipe, train or branch, R. & R., for each connection made	3
Push rod, R. & R. (1 connecting pin).....	3
Release valve, R. & R.....	6

DETAILS.	Cents.
Disconnecting release rod (2 spring cotters)	4
Disconnecting release valve.....	2
Total	6

Release valve, removed, repaired and replaced (R. & R., 4 cents).....	9
Release valve rod, removed, repaired and replaced	3

DETAILS.	Cents.
1 spring cotter	2
Removing staple	1
Total	3

RULE III — *Continued.*

	Cents.
Reservoir, R. & R.....	29
DETAILS.	Cents.
Removing from car (2 nuts, $\frac{5}{8}$ inch, 2 cents each).....	4
Disconnecting from cylinder (7 nuts, $\frac{1}{2}$ inch, 1 cent each).....	7
Removing release rods (2 spring cot- ters)	4
Removing release valve.....	2
Removing two plugs.....	2
Removing triple valve (2 nuts, $\frac{5}{8}$ inch, 2 cents each).....	4
Disconnecting union	3
Disconnecting union, retaining pipe..	3
Total	29
Removing cylinder cap (3 nuts, $\frac{1}{2}$ inch, 1 cent each)	3
Removing slide valve (3 nuts, $\frac{1}{2}$ inch, 1 cent each)	3
Retaining valve repaired.....	25
DETAILS.	Cents.
Retaining valve handle, R. & R.....	2
Retaining valve case, R. & R.....	1
Retaining valve, ground in.....	5
Retaining valve cock key, ground in..	15
Retaining valve cock key and spring, R. & R.....	2
Total	25
Retaining valve, R. & R. (2 lag screws 2 cents, valve 3 cents).....	5
Slide valve, removed, ground in and re- placed	33
Slide valve spring, R. & R.....	6
DETAILS.	Cents.
Cylinder cap (3 cap screws).....	2
Removing riveted pin.....	4
Total	6
Strainer, R. & R. (disconnecting union)....	3

RULE III — *Continued.*

	Cents.
Triple-cylinder bushing, reground or re-fitted	\$1.12
Triple cylinder cap, R. & R. (3 nuts, ½ inch, 1 cent each)	3
Triple cylinder cap gasket, R. & R. (3 nuts, ½ inch, 1 cent each)	3
Triple piston packing ring, fitted	22
Triple valve, removed, cleaned, oiled, tested and stenciled	40

DETAILS.	Cents.
Train pipe union disconnected	3
Retaining pipe union disconnected	3
Removing triple (2 nuts, ⅝ inch, 2 cents each)	4
Check valve case (2 cap screws)	2
Emergency valve seat	5
Cylinder cap (3 bolts)	3
Cleaning, testing and stenciling	20
Total	40

Triple valve gasket, R. & R.	10
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DETAILS.	Cents.
Disconnecting branch pipe union	3
Disconnecting retaining pipe union	3
Removing triple (2 nuts, ⅝ inch, 2 cents each)	4
Total	10

Unions disconnected and connected	3
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The following basic units were used in determining the details of prices given above. These units are not to be used in rendering bills, but may be used in the determination of cost of other combinations of air-brake repairs not above mentioned.

RULE III — *Continued.*

	Cents.
Cap screws or studs or bolts, R. & R., 1 or more.....	2
Cylinder cleaning, testing and stencil- ing	24
Emergency valve seat, R. & R.....	5
Graduating stem nut, R. & R.....	2
Lag or wood screws, R. & R., each..	1
Nuts tightened when loose, each.....	1
Nuts, $\frac{1}{2}$ inch or less, R. & R., 1' or 2 on same bolt.....	1
Nuts, $\frac{3}{8}$ inch or over, R. & R., 1 or 2 on same bolt.....	2
Pins connecting R. & R. (including split key)	3
Pins riveted, R. & R., each.....	4
Plugs, oil, R. & R., each.....	1
Spring cotters, R. & R., each.....	2
Staples, R. & R., each.....	1
Testing air (after repairs).....	5
Threads on pipe, cutting, per coupling	5
Train or branch pipe, disconnected and connected, or only connected, each connection	3
Triple valve, cleaning, testing and stenciling	20
Union disconnected and connected...	3

SETTLEMENT FOR CARS.

RULE II2. The company on whose line the bodies or trucks are destroyed shall report the fact to the owner immediately after their destruction, and shall have its option whether to rebuild or settle for the same.

RULE II3. For the mutual advantage of railway companies interested, the settlement for a car owned or controlled by a railway company, when damaged or destroyed upon a private track, shall be assumed by the railway company delivering the car upon such tracks.

RULE II4. If the company on whose line the car is destroyed elects to rebuild either body

RULE 114—*Continued.*

or trucks, or both, the original plan of construction must be followed, and the original kind and qualities of materials used. In such cases no allowance shall be made for betterments.

RULE 115. If only the body of a car is destroyed, and the company destroying it elects to return the trucks, they shall be put in good order, or accompanied by a defect card, covering all defects or improper repairs made by them for which owners are not responsible, and forwarded, within 60 days, free of freight or other charges, to the nearest point on the line of the company owning or operating the car, and the number, line and class of car destroyed shall be stenciled or painted on each truck so returned.

Except in case of trucks of 50,000 pounds capacity or less, when railroad destroying the car may elect to retain the trucks and settle for them (with the exception of the wheels) at scrap or secondhand value, in accordance with M. C. B. rules, except those belonging to cars of individual ownership.

RULE 116. The settlement prices of new eight-wheel cars shall be as follows, with an addition of \$27.50 for each car equipped with 8-inch air-brake equipment and \$35 for 10-inch air-brake equipment. The road destroying a car with air brakes may elect to return the air-brake apparatus, including such attachments as

RULE 116—*Continued.*

are usually furnished by the air-brake manufacturer, complete and in good condition:

BODIES OF 8-WHEEL CARS.

Wood.

Box, 40 feet long or over.....	\$440.00
Box, 36 feet long or over, but under 40 feet	385.00
Box, 34 feet long or over, but under 36 feet	360.00
Box, 32 feet long or over, but under 34 feet	330.00
Box, under 32 feet long.....	265.00
Box, ventilated, 40 feet long or over...	470.00
Box, ventilated, 36 feet long, but under 40 feet	415.00
Box, ventilated, 34 feet long, but under 36 feet	385.00
Flat, plain, 40 feet long or over.....	200.00
Flat, plain, 32 feet long or over, but under 40 feet.....	155.00
Flat, plain, under 32 feet long.....	110.00
Gondola, drop-bottom, 40 tons capacity or over	330.00
Gondola, drop-bottom, 30 tons capacity or over, but under 40 tons.....	300.00
Gondola, drop-bottom, 25 tons capacity or over, but under 30 tons.....	275.00
Gondola, drop-bottom, 20 tons capacity or under	200.00
Gondola, hopper-bottom, 50 tons capacity	440.00
Gondola, hopper-bottom, 40 tons capacity or over, but under 50 tons.....	360.00
Gondola, hopper-bottom, 30 tons capacity or over, but under 40 tons.....	330.00
Gondola, hopper-bottom, 25 tons capacity or over, but under 30 tons.....	290.00
Gondola, hopper-bottom, 20 tons capacity or less.....	220.00

RULE 116—*Continued.*

Gondola, plain, 50 tons capacity and over	\$350.00
Gondola, plain, 40 tons capacity, but under 50 tons.....	300.00
Gondola, plain, 30 tons capacity, but under 40 tons.....	275.00
Gondola, plain, 25 tons capacity, but under 30 tons	250.00
Gondola, plain, under 25 tons.....	140.00
Stock, 34 feet long or over.....	330.00
Stock, 32 feet long or over, but under 34 feet	300.00
Stock, under 32 feet long.....	265.00

The lengths of cars above mentioned refer to the lengths over the end sills.

In the case of double-deck stock cars, \$25.00 may be added to the prices given above for stock cars.

Where the capacity of any car other than a gondola is 60,000 pounds or over, 10 per cent should be added to the above prices for the car bodies.

When cars of 60,000 pounds capacity or over, and so stenciled, have trucks with journals 4 inches or over in diameter when new, \$40 per car shall be added to the figure as given above for the values of car bodies, when equipped with metal body bolsters.

When cars are equipped with metal center sills, the following prices shall be added to the values of bodies for cost of such metal sills:

10 inches or less.....	\$ 60.00
Over 10 inches	80.00

When a car is equipped with two metal draft members not less than 7 inches in depth con-

RULE 116—*Continued.*

tinuous from end to end of car, in combination with metal needle beams, \$40.00 shall be added to the value of the body of the car for the cost of such metal draft members.

Steel.

Box, wooden body, metal underframe, 50 tons capacity, 38 feet 6 inches or over, over end sills.....	\$825.00
Box, wooden body, metal underframe, less than 50 tons capacity, 36 feet long or over	740.00
Flat, wooden floor, metal underframe, 30 tons capacity, 34 feet long or over.	500.00
Flat, wooden floor, metal underframe, 50 tons capacity, 40 feet over end sills...	770.00
Flat, wooden floor, metal underframe, 40 tons capacity, 40 feet over end sills	590.00
Flat, wooden floor, metal underframe, 40 tons or over, but under 50 tons, 34 feet long over end sills, but under 40 feet	510.00
Gondola, all metal, twin-drop bottom, 40 tons capacity, but less than 50 tons capacity, 36 feet, but under 40 feet...	790.00
Gondola, all metal, hopper-bottom, 50 tons capacity, 33 feet over end sills..	825.00
Gondola, all metal, drop-bottom, 50 tons capacity, 40 feet over end sills.....	815.00
Gondola, all metal, plain, 50 tons ca- pacity, 40 feet over end sills.....	790.00
Gondola, wooden body, metal under- frame, flat-bottom, 40 feet over end sills	790.00
Gondola, wooden body, metal under- frame, hopper-bottom, 32 feet over end sills, but under 40 feet.....	650.00
Stock, wooden body, metal underframe, less than 50 tons capacity, 36 feet long or over	715.00

RULE 116 — *Continued.*

TRUCKS.

50,000 pounds capacity and less, with metal transoms and wooden bolster, per pair	\$215.00
60,000 pounds capacity or under, with wooden bolster, per pair.....	215.00
50,000 pounds capacity, all-metal trucks, per pair	225.00
60,000 pounds capacity but under 80,000 pounds, all metal, per pair.....	315.00
70,000 pounds capacity, but under 80,000 pounds, with wooden bolster, per pair	215.00
80,000 pounds capacity but under 100,000 pounds, all metal, per pair.....	400.00
100,000 pounds capacity, or over, all metal, per pair	425.00

Prices include brake beams, complete, truck levers, dead-lever guides and bottom-connection rods.

For trucks with steel or steel-tired wheels an additional allowance of \$112 per car shall be made.

All trucks in service of 60,000 pounds capacity or over, which consist entirely of metal, with the exception of the spring plank, shall be known hereafter as all-metal trucks.

RULE 117. In the case of wooden car bodies the depreciation due to age shall be figured at 6 per cent per annum upon the yearly depreciated value of such car bodies.

In the case of all-steel car bodies the depreciation shall be figured at 5 per cent per annum.

In the case of car bodies with steel underframes the depreciation shall be figured at 5½ per cent per annum, with the exception of steel

RULE 117 — *Continued.*

underframe flat cars having wooden floors, which shall be figured at 5 per cent per annum.

The depreciation on the tanks of tank cars for handling non-corrosive substances shall be 4 per cent per annum; for tanks of tank cars handling corrosive substances the depreciation shall be 5 per cent per annum.

The depreciation on trucks other than all-metal shall be figured at 6 per cent per annum.

The depreciation on all-metal trucks shall be figured at 5 per cent per annum.

Allowances for depreciation shall in no case exceed 60 per cent of the value new.

The amounts \$27.50 and \$35.00 for air brakes shall not be subject to any depreciation.

RULE 118. The bodies of refrigerator cars, stock cars permanently fitted for stall shipments and other freight cars, designed for special purposes, not referred to above, shall be settled for at the present cost price, as may be agreed to by the parties in interest, less the deduction for depreciation due to age, which shall be on the same basis as for regular freight equipment.

In the case of cars equipped with racks for carrying coke and for other such purposes, and also stock cars other than those permanently fitted for stall shipments with feeding and watering attachments, the actual cost of these equipments shall be added to the standard settlement price for such cars.

RULE 119. The company on whose line the

RULE 119 — *Continued.*

body or trucks of a car are seriously damaged, but not destroyed, may notify the owner and ask an appraisement on the damage done to the car as a basis for the disposal of the damaged car.

SENDING HOME WORN-OUT AND DAMAGED CARS.

RULE 120. A car unsafe to load on account of general worn-out condition, due to age or decay, shall be reported to its owner, who must be advised of all existing defects. If the owner elects to have it sent home, he shall furnish two home cards, noting upon them existing defects and the route over which the car is to be returned to its owner.

Such cards shall be attached to each side of the body of the car, and of the form shown on page 87. They shall be printed on both sides, and shall be filled in on both sides with ink or black indelible pencil.

RULE 121. A car which is safe to run, but unsafe to load on account of serious damage caused by wreck or accident, shall be reported to the owners for appraisement and disposition, and disposed of as provided in Rule 120, if the owner so elects.

FURNISHING MATERIALS.

RULE 122. Companies shall promptly furnish to each other, upon requisition, and forward free over their own road, material for repairs of their cars damaged upon foreign lines, excepting that the company having car in its

RULE 122 — *Continued.*

possession at the time shall provide from its own stock the following:

Lumber, forgings, hardware stock, paint, hairfelt, piping, air-brake material and all M. C. B. Standard material.

Requisitions for such material shall specify that same is for repairs of cars, giving car number and initial of such car, together with pattern number or other data to enable correct filling of requisition.

SETTLEMENT OF DISPUTES.

RULE 123. In order to settle disputes arising under the rules, and to facilitate the revision of the rules at the annual conventions of the Association, an Arbitration Committee of five representative members shall be appointed annually by the Executive Committee; three members of this committee to constitute a quorum.

In case of any dispute or question arising under the rules between the subscribers to said rules, the same may be submitted to this committee, through the secretary, in abstract, jointly, said abstract setting forth the point or points at issue, and each party's interpretation of the rules upon which its claim is based, clearly and concisely, not exceeding three typewritten pages of letter size, single space, which shall be signed by both parties to the dispute. Should one of the parties refuse or fail to furnish the necessary information, the committee

RULE 123 — *Continued.*

shall use its judgment as to whether, with the information furnished, it can properly give its opinion. The decisions of the committee shall be final and binding upon the parties concerned. This committee shall report its decisions to the Association, and its report shall be incorporated in the annual report of proceedings of the Association.

REVISION OF THIS CODE OF RULES.

RULE 124. The Arbitration Committee shall ask for suggestions of changes, amendments and additions to these rules prior to each annual convention, which it shall consider, and it shall report its recommendations to the succeeding annual convention.

RULE 125. In the revision of these rules by the Association, a two-thirds vote shall be necessary for adoption.

RULE 126. Voting powers shall be the same as prescribed in the Constitution of the Master Car Builders' Association on matters pertaining to the adoption of standards and the expenditure of money.

RULE 127. This Code of Rules shall be introduced for the discussion and revision at one session of the Master Car Builders' Association convention each year.

CONDITIONS OF ACCEPTANCE OF THIS CODE.

RULE 128. Any car owner or railway company may become a party to this Code of

RULE 128—*Continued.*

Rules by giving notice through one of its general officers to the Secretary of the Master Car Builders' Association.

Railroad companies becoming subscribers to this Code of Rules must have a representative member in the Master Car Builders' Association.

RULE 129. Any car owner or railway company that is a party to this Code of Rules shall be bound by same through its successive revisions, until one of its general officers files with the Secretary of the Master Car Builders' Association its notification of withdrawal.

RULE 130. Acceptance or rejection of this Code of Rules must be as a whole, and no exception to an individual rule or rules shall be valid.

RULE 131. This Code of Rules shall take effect September 1, 1911.

RETURN CARD.

.....Car No.....
 from.....Ry.
 to.....Ry.
 for the following defects.....

.....
Inspector.

3½ by 8 inches.

SEE RULE 2.

NOTE.—Fill in defects on both sides with ink or black indelible pencil. Attach this card with four tacks on outside face of intermediate sill between cross-tie timbers.

M. C. B. DEFECT CARD.

(Name of Road.)

Date.....

Car specified below will be received at any point on this company's line with the following defects:

Car No.....Initials.....

Inspector at.....

Send bill on this card to.....

3½ by 8 inches.

SEE RULE 5.

THE.....RAILWAY OO.

M. C. B. DEFECT CARD. Issued by..... Ry. At..... Date.....191..

Inspector..... Reading as follows.....

.....
.....
.....
.....
.....
.....
.....
.....

M. C. B. REPAIR CARD. Issued by..... Ry. At..... Date.....191..

Inspector..... Reading as follows.....

.....
.....
.....
.....
.....
.....
.....
.....

DISPOSITION OF CAR. Carded to Shop; Repaired; went forward without Repairs.

Other side shown on page 80.

M. C. B. ASSOCIATION—REPAIR CARD

(NAME OF RAILROAD)

TO BE TACKED ON CAR

End	Repairs Made	Iron			Chain	Lumber	Springs	Cast Steel	Why Made
		Cast	Wrot.	Mall.					

Labor
Hours

Inspector

Date 19 Repaired at

Initial
or Name

Kind

Car No.

Printing on back of repair card should be the reverse of that shown above.
3½ by 8 inches.

M. C. B. ASSOCIATION—BILLING REPAIR CARD

(NAME OF RAILROAD)

TO BE ATTACHED TO BILL

End	Repairs Made	Iron			Chain	Lumber	Springs	Cast Steel	Why Made
		Cast	Wrot.	Mall.					

Labor
Hours

Inspector

Date 19 Repaired at

Initial

or Name

Kind

Date

Car No.

Billing repair card must not have carbonized back.
3½ by 8 inches.

To Railroad Company, Dr.
For Wheels and Axles put under Cars, Month of 191

Date.....	Received payment, \$.
	190.....

FROM	
.....	R. R.
TO	
.....	R. R.
VIA	
.....	
.....	
Car No.	Initials.
To be shopped for.	
.....	
.....	
.....	
(Head of Car Department.)	

3½ by 8 inches.

SEE RULE 120.

FORM OF HOME CARD

AMERICAN RAILWAY ASSOCIATION.

Car Service Rule 15.

Unless otherwise agreed, the cost of transferring the lading of freight cars or rearrangement of lading at junction points shall be settled as follows:

First. The delivering road shall pay cost of transfer or rearrangement:

(a) When transfer is due to defective equipment that is not safe to run, according to M. C. B. Rules.

(b) When transfer or rearrangement of load is due to contents being improperly loaded or overloaded, according to M. C. B. Rules, or the Interstate Commerce Commission Regulations for the transportation of explosives, or the American Railway Association Regulations for the transportation of inflammable articles and acids.

(c) When transfer is due to delivering line not desiring the equipment to go beyond junction points.

Second. The receiving road shall pay cost of transfer or rearrangement:

(d) When cars exceed load limit or can not pass clearances or be moved through on account of any other disability of receiving line.

(e) When receiving road desires transfer to save cost of mileage or per diem.

NOTE.—The word “cars” covers both closed and open cars and lading. The words “load limit” refer to the limits placed on bridges, tracks, etc., and not to car capacity.

LIST OF CAR OWNERS AND RAILWAY COMPANIES

WHICH HAVE ADOPTED THE CODE OF RULES GOVERNING THE CONDITION OF, AND REPAIRS TO, FREIGHT CARS FOR THE INTERCHANGE OF TRAFFIC.

The following is a complete list of car owners and railway companies which have given notice of the adoption of the above Code of Rules.

Other companies which adopt this Code of Rules should notify the secretary, in accordance with the Rules, so that the names of such companies may be included in the list thereafter. Notice should be given of all changes in the names of companies in this list:

Alabama Great Southern.
 Alabama & Mississippi.
 Alabama & Vicksburg.
 Alameda & San Joaquin.
 Albany & Hudson.
 Algoma Central.
 Aliquippa & Southern.
 Allegheny Valley.
 American Cotton Oil Co.
 American Creosoting Co.
 American Fast Freight Line.
 American Refrigerator Transit Co.
 American Tank Line.
 Anglo-American Tar Products Co.
 Ann Arbor.
 Arkansas Central.
 Arkansas, Louisiana & Gulf.
 Arkansas, Louisiana & Southern.
 Arizona Eastern.
 Armour Car Lines.
 Armour Packing Co.

Arms Palace Horse Car Co.
 Astoria & Columbia River.
 Atchison, Topeka & Santa Fe.
 Atlanta, Knoxville & Northern.
 Atlanta Stone, Coal & Lumber Line.
 Atlanta, Birmingham & Atlantic.
 Atlantic & Pacific.
 Atlanta & Birmingham Air Line.
 Atlanta & West Point.
 Atlantic Coast Line.
 Atlantic Seaboard Line.
 Atlantic, Valdosta & Western.
 Baltimore & Ohio.
 Baltimore & Ohio Southwestern.
 Baltimore & Potomac.
 Baltimore & Sparrows Point.
 Bangor & Aroostook.
 Barberton Belt.
 Barrett Mfg. Co.
 Bay Terminal.
 Beech Creek.
 Bellefonte Central.
 Bellingham Bay & British Columbia.
 Bennington & Rutland.
 Bessemer & Lake Erie.
 Bessemer Coke Co.
 Birmingham Southern.
 Booth's Refrigerator Line.
 Booth's Cold Storage System.
 Boston & Albany.
 Boston & Lowell.
 Boston & Maine.
 Boston, Hoosac Tunnel & Western.
 Brimstone Railroad & Canal Co.
 Bristol, Elizabethton & North Carolina.
 Buffalo, Rochester & Pittsburg.
 Buffalo & Susquehanna.
 Bullfrog Goldfield.
 Burlington, Cedar Rapids & Northern.
 Burlington & Missouri River in Nebraska.
 Butte, Anaconda & Pacific.
 Cairo, Vincennes & Chicago.

California Fruit Transportation Co.
 Cammal & Black Forest.
 Canada Southern.
 Canadian Northern.
 Canadian Pacific.
 Canadian Northern Quebec.
 Cananea Consolidated Copper Co.
 Cananea, Yaqui River & Pacific.
 Canda Cattle Car Co.
 Cape Girardeau South-Western.
 Carolina & North-Western.
 Carolina, Clinchfield & Ohio.
 Central Indiana.
 Central New England.
 Central of Georgia.
 Central Railroad of New Jersey.
 Central Vermont.
 Champaign & Havanna.
 Chattanooga, Rome & Columbus.
 Chattanooga Southern.
 Chesapeake, Ohio & South-Western.
 Chesapeake & Ohio.
 Chesapeake & Western.
 Chicago, Burlington & Kansas City.
 Chicago, Burlington & Northern.
 Chicago, Burlington & Quincy.
 Chicago, Cincinnati & Louisville.
 Chicago, Indiana & Southern.
 Chicago, Fort Madison & Des Moines.
 Chicago Great Western.
 Chicago, Indianapolis & Louisville.
 Chicago Junction.
 Chicago, Kalamazoo & Saginaw.
 Chicago, Lake Shore & Eastern.
 Chicago, Milwaukee & Gary.
 Chicago, Milwaukee & Puget Sound.
 Chicago, Milwaukee & St. Paul.
 Chicago, New York & Boston Refrigerator Co.
 Chicago, Peoria & St. Louis.
 Chicago Refrigerator Car Co.
 Chicago, Rock Island & Pacific.
 Chicago, St. Louis & Pittsburgh.

Chicago, St. Paul, Minneapolis & Omaha.
 Chicago Terminal Transfer.
 Chicago Union Transfer.
 Chicago, West Pullman & Southern.
 Chicago & Alton.
 Chicago & Eastern Illinois.
 Chicago & Erie.
 Chicago & Iowa.
 Chicago & Milwaukee Electric.
 Chicago & North Western.
 Chicago & South Bend.
 Chicago & Western Indiana and Belt Railway.
 Chihuahua & Pacific.
 Choctaw, Oklahoma & Gulf.
 Cincinnati, Hamilton & Dayton.
 Cincinnati, Selma & Mobile.
 Cincinnati Northern.
 Cincinnati Southern.
 Cincinnati, New Orleans & Texas Pacific.
 Cleveland, Akron & Columbus.
 Cleveland, Cincinnati, Chicago & St. Louis.
 Cleveland & Marietta.
 Cleveland, Canton & Southern.
 Cleveland, Lorain & Wheeling.
 Cleveland Provision Co.
 Cleveland Terminal & Valley.
 Clove Branch.
 Coal & Coke.
 Cold Blast Refrigerator Transit Co.
 Cold Blast Transportation Co.
 Colorado & Southern.
 Colorado & South-Eastern.
 Colorado & Wyoming.
 Colorado Midland.
 Colorado Springs & Cripple Creek District.
 Columbia & Puget Sound.
 Connecticut River.
 Consolidated Cattle Car Co.
 Consolidated Rolling Stock Co.
 Continental Fruit Express.
 Cornwall.
 Cornwall & Lebanon.

Corsicana Cotton Oil Co.
 Corvallis & Eastern.
 Craig Oil Co.
 Crystal Car Line.
 Cudahy Refrigerator Line.
 Cumberland Valley.
 Cumberland & Pennsylvania.
 Dairy Shippers' Despatch.
 Delaware, Lackawanna & Western.
 Delaware River & Union.
 Delaware, Susquehanna & Schuylkill.
 Delaware & Hudson Co.
 Delray Connecting.
 Denver & Rio Grande.
 Denver, Laramie & Northwestern.
 Detroit, Toledo & Milwaukee.
 Detroit & Lima Northern.
 Detroit & Mackinac.
 Des Moines & Fort Dodge.
 Des Moines & Northern.
 Dolese & Shepard.
 Dominion Atlantic.
 Doniphan, Kensett & Searcy.
 Doud Stock Car Co.
 Dry Fork.
 Duluth & Iron Range.
 Duluth, Missabe & Northern.
 Duluth, South Shore & Atlantic.
 Eagle Oil Co.
 Elgin, Joliet & Eastern.
 Elizabeth River.
 Elmira, Cortland & Northern.
 El Paso & Southwestern.
 Empire Oil Works.
 Erie.
 Erie & Michigan Ry. & Nav. Co.
 Erie & Wyoming Valley.
 Esquimalt & Nanaimo.
 Evansville & Terre Haute.
 Express Coal Line.
 Fairbank Co., The N. K.
 Fall Brook.

Federal Creosoting Co.
 Findlay, Fort Wayne & Western.
 Fitchburg.
 Florence & Cripple Creek.
 Florida Central.
 Florida East Coast.
 Fort Smith, Subiaco & Eastern.
 Fort Smith & Western.
 Fort Worth Belt.
 Fort Worth & Denver City.
 Freedom Oil Works.
 Galveston, Harrisburg & San Antonio.
 Geneva, Ithaca & Sayre.
 George's Creek & Cumberland.
 Georgia.
 Georgia, Florida & Alabama.
 Georgia Southern & Florida.
 German-American Car Co.
 German-American Refrigerator Express.
 German-American Tank Line.
 Glade Oil Works.
 Globe Soap Co.
 Golden Circle.
 Goodwin Car Co.
 Grand Rapids & Indiana.
 Grand Trunk.
 Grand Trunk Pacific.
 Great Northern Railway Line.
 Great Western Oil Refg. Co.
 Green Bay & Western.
 Groveton, Lufkin & Northern.
 Gulf, Colorado & Santa Fe.
 Gulf Refining Co.
 Gulf, Western Texas & Pacific.
 Guyton, W. A. & Co.
 Hannibal & St. Joseph.
 Hartford & Connecticut Western.
 Hecla Belt Line.
 Heinz, H. J., & Co.
 Higgins Oil & Fuel Co.
 Higley Co. Refrigerator Line.
 Hocking Valley.

Housatonic.
 Houston East & West Texas.
 Houston & Texas Central.
 Huntington & Broad Top Mountain.
 Hutchinson & Southern.
 Illinois Central.
 Illinois Northern.
 Illinois Southern.
 Illinois Terminal.
 Illinois Traction System.
 Imperial Oil Co. Ltd.
 Indiana, Bloomington & Western.
 Indianapolis, Decatur & Western.
 Indiana Pipe Line & Refining Co.
 Intercolonial of Canada.
 International & Great Northern.
 Interstate.
 Iowa Central.
 Iron Car Express Coal Line.
 Jacksonville & St. Louis.
 Jacob Dold Packing Co.
 Jamison Coal & Coke Co.
 Kalamazoo, Lake Shore & Chicago.
 Kanawha & Michigan.
 Kansas City, Fort Scott & Memphis.
 Kansas City, St. Joseph & Council Bluffs.
 Kansas City, Memphis & Birmingham.
 Kansas City, Mexico & Orient.
 Kansas City Southern.
 Kansas City Terminal.
 Kentucky Refining Co.
 Keokuk & Western.
 Keystone Palace Horse Car Co.
 Kilpatrick Bros. & Collins Contracting Co.
 Knapp, I. N.
 Lackawanna Coal & Coke Co.
 Lackawanna Iron & Steel Co.
 Lackawanna Steel Co.
 Lake Carrier's Oil Co.
 Lake Champlain & Moriah.
 Lake Erie & Detroit River.
 Lake Erie & Western.

Lake Shore & Michigan Southern.
 Lake Superior & Ishpeming.
 Lake Terminal.
 Las Vegas & Tonopah.
 Leavenworth, Kansas & Western.
 Leetonia.
 Lehigh & Hudson River.
 Lehigh & New England.
 Lehigh Valley.
 Lexington & Eastern.
 Lipe, F. W.
 Litchfield & Madison.
 Litchfield, Carrollton & Western.
 Live Poultry Transportation Co.
 Long Island.
 Louisiana & Arkansas.
 Louisiana & Northwest.
 Louisiana & Pacific.
 Louisiana Railway & Navigation Co.
 Louisiana Western.
 Louisville Cotton Oil Co.
 Louisville & Nashville.
 Louisville, New Orleans & Texas.
 Louisville Soap Co.
 Louisville, St. Louis & Texas.
 Louisville & St. Louis.
 Lutz & Schramm Co.
 McCloud River.
 Macon & Birmingham.
 Madison, Alton & Chicago.
 Mahoning Valley.
 Maine Central.
 Manhattan Oil Co.
 Manistee & Grand Rapids.
 Manistee & North-Eastern.
 Manitoba & North-Western Ry. of Canada.
 Manufacturers' Junction.
 Marietta, Columbus & Cleveland.
 Marquette & Southeastern.
 Maryland & Pennsylvania.
 Martin, John C.
 Marshalltown & Dakota.

Mason City & Fort Dodge.
 Mather Stock Car Co.
 Mercer Valley.
 Merchants Despatch Transportation Co.
 Mexican Central.
 Mexican International.
 Mexican Northern.
 Michigan Ammonia Works.
 Michigan Central.
 Midland Valley.
 Midland Valley Tank Line.
 Midland Terminal.
 Miller's Sons' Co., A. D.
 Milwaukee, Lake Shore & Western.
 Mineral Point Zinc Co.
 Minneapolis, St. Paul & Sault Ste. Marie.
 Minneapolis & St. Louis.
 Minnesota & International.
 Mississippi Central.
 Mississippi River & Bonne Terre.
 Mississippi River, Hamburg & Western.
 Missouri Pacific.
 Missouri & North Arkansas.
 Missouri, Kansas & Texas.
 Mobile & Birmingham.
 Mobile & Ohio.
 Mobile, Jackson & Kansas City.
 Monongahela Connecting.
 Monongahela River Consol. Coal & Coke Co.
 Montana Union.
 Montpelier & Welis River.
 Monte Cristo.
 Montour.
 Montpelier & Wells River.
 Mooney Car Line Co.
 Morgan's Louisiana & Texas Railroad &
 Steamship Co.
 Morganstown & Kingwood.
 Morrissey, Fernie & Michel.
 Morton-Gregson Car Lines.
 Munising.
 Nacozari.

Nashville, Chattanooga & St. Louis.
 National Ammonia Co.
 National Car Co.
 National Car Line.
 National Rolling Stock Co.
 Nelson Morris & Co.
 Nevada Copper Belt.
 Nevada Northern.
 Newburgh & South Shore.
 Newburgh, Dutchess & Connecticut.
 New Orleans Great Northern.
 New Orleans & North-Eastern.
 Newport News & Mississippi Valley.
 New York Central & Hudson River.
 New York & Northern.
 New York & Ottawa.
 New York, Chicago & St. Louis.
 New York, New Haven & Hartford.
 New York, Ontario & Western.
 New York, Pennsylvania & Ohio.
 New York, Philadelphia & Norfolk.
 New York, Providence & Boston.
 New York & New England.
 New York, Susquehanna & Western.
 New York, Texas & Mexican.
 Norfolk Southern.
 Norfolk & Carolina.
 Norfolk & Portsmouth Belt Line.
 Norfolk & Western.
 Northern Central.
 Northern Pacific.
 Old Colony.
 Old Dominion Copper Mining & Smelting Co.
 Ohio Southern.
 Ohio & Mississippi.
 Ogdensburg & Lake Champlain.
 Omaha & St. Louis.
 Oregon Electric.
 Oregon Railroad & Navigation Co.
 Oregon Short Line.
 Overland Refrigerator Express.
 Owasco River.

Pacific Electric.
 Pacific Fruit Express Co.
 Paragon Refining Co.
 Parral & Durango.
 Penn Gas Coal Co.
 Pennsylvania Coal & Coke Co.
 Pennsylvania Co.
 Pennsylvania Paraffine Works.
 Pennsylvania Railroad.
 Pennsylvania, Poughkeepsie & Boston.
 Pennsylvania & North-Western.
 Peoria, Decatur & Evansville.
 Pere Marquette.
 Petersburg.
 Philadelphia & Reading.
 Philadelphia, Baltimore & Washington.
 Pierce Fordyce Oil Assn.
 Pittsburgh, Akron & Western.
 Pittsburgh, Allegheny & McKees Rocks.
 Pittsburgh, Chartiers & Youghiogeny.
 Pittsburgh, Cincinnati, Chicago & St. Louis.
 Pittsburgh Coal Co.
 Pittsburg, Shawmut & Northern.
 Pittsburg Provision & Packing Co.
 Pittsburgh & Buffalo Co.
 Pittsburgh & Eastern.
 Pittsburgh & Lake Erie.
 Pittsburgh & Ohio Valley.
 Pittsburgh & Western.
 Plant System.
 Pontiac, Oxford & Northern.
 Portland & Rumford Falls.
 Prescott & Eastern.
 Produce Shippers' Despatch.
 Producers' Pipe Line Co.
 Providence & Worcester.
 Provision Dealers' Despatch.
 Quebec & Lake St. John.
 Quebec, Montreal & Southern.
 Quincy, Omaha & Kansas City.
 Raleigh & Gaston.
 Rio Grande, Sierra Madre & Pacific.

Richmond, Fredericksburg & Potomac.
 Rio Grande Western.
 Rock Island & Peoria.
 Rome, Watertown & Ogdensburg.
 Rutland.
 Saginaw Valley & St. Louis.
 Saint Clair Terminal.
 San Antonio & Aransas Pass.
 San Pedro, Los Angeles & Salt Lake.
 Santa Fe Central.
 Santa Fe Pacific.
 Santa Fe, Prescott & Phoenix.
 Santa Fe Refrigerator Despatch.
 Scioto Valley.
 Seaboard Air Line.
 Seattle & International.
 Shenandoah Valley.
 Sherman, Shreveport & Southern.
 Shippers' Refrigerator Car Co.
 Shreveport Creosoting Co.
 Sierra Ry. Co. of California.
 Sinclair & Co., Ltd., T. M.
 Sonora.
 South Buffalo.
 South Carolina.
 South-Eastern Line.
 South Florida.
 Southwestern of Arizona.
 Southern.
 Southern Central.
 Southern Freight Line.
 Southern Indiana.
 Southern Iron Car Line.
 Southern Oil Co.
 Southern Pacific (Pacific System).
 Southern Pacific R. R. Co. of Mexico.
 Spokane & Inland Empire.
 Spokane Falls & Northern.
 Spokane International.
 Spokane, Portland & Seattle.
 St. Joseph, South Bend & Southern.
 St. Joseph & Grand Island.

St. Louis, Brownsville & Mexico.
 St. Louis Car Co. Line.
 St. Louis, Chicago & St. Paul.
 St. Louis Dressed Beef & Provision Co.
 St. Louis, Kansas City & Colorado.
 St. Louis, Keokuk & North-Western.
 St. Louis, Peoria & Northern.
 St. Louis Refrigerator Car Co.
 St. Louis, Rocky Mountain & Pacific.
 St. Louis South-Western.
 St. Louis South-Western Railway of Texas.
 St. Louis Transfer.
 St. Louis, Troy & Eastern.
 St. Louis, Watkins & Gulf.
 St. Louis & Hannibal.
 St. Louis & O'Fallon.
 St. Louis & San Francisco.
 St. Paul & Duluth.
 Staten Island Rapid Transit.
 Stephenville North & South Texas.
 Street's Western Stable Car Line.
 Susquehanna & New York.
 Swift & Co.
 Swift Refrigerator Transportation Co.
 Swift Live Stock Express Line.
 Sydney & Louisburg.
 Tacoma Eastern.
 Tehuantepec National.
 Temiskaming & Northern Ontario.
 Tennessee Central.
 Tennessee Copper Co.
 Texas & New Orleans.
 Texas Brewing Co.
 Texas Central.
 Texas Company.
 Texas Pacific.
 Tionesta Valley.
 Toledo, Cincinnati & St. Louis.
 Toledo, Columbus & Cincinnati.
 Toledo, Peoria & Western.
 Toledo, St. Louis & Western.
 Toledo Terminal.

Toledo & Ohio Central.
 Toledo & Ohio Central Extension.
 Toledo & Western.
 Tonopah & Goldfield.
 Tonopah & Tidewater.
 Toronto, Gray & Bruce.
 Toronto, Hamilton & Buffalo.
 Tremont & Gulf.
 Trinity & Brazos Valley.
 Troy & Boston.
 Tyler South-Eastern.
 Union.
 Union Pacific.
 Union Refrigerator Transit Co.
 Union Sand & Material Co.
 Union Stock Yards & Transit Co. of Chicago.
 Union Stock Yards Co. of Omaha.
 Union Tank Line.
 United Coal Co.
 Vandalia.
 Vera Cruz & Pacific.
 Vicksburg, Shreveport & Pacific.
 Vinton Colliery Co.
 Virginia.
 Virginia & Southwestern.
 Wabash Railway.
 Walworth & Neville Mfg. Co.
 Washington Coal & Coke Co.
 Washington Southern.
 Waters Pierce Oil Co.
 Wheeling & Lake Erie.
 Western Car Co.
 Western Live Stock Express.
 Western Maryland.
 Western Railway of Alabama.
 Western New York & Pennsylvania.
 Western Rolling Stock & Equipment Co.
 West Jersey & Sea Shore.
 Westmoreland Coal Co.
 West Shore.
 West Side Belt.
 West Virginia Central & Pittsburg.

Williamsville, Greenville & St. Louis.
 Wisconsin Central.
 Wisconsin & Northern.
 Yellowstone Park.
 Zanesville & Ohio River.
 Zanesville & Western.

PREFACE

These rules make no attempt to prescribe
 for and therefore characteristic with the ex-
 pectations to their cars maintained by standard
 work and test in fair service to the public
 cards will not be returned for any reason
 whatsoever.

Railroad companies handling cars are re-
 sponsible for damage done to any car by
 certain means, including or accident and
 for improper repairs made by them and
 they should make proper repairs at their
 own expense or issue defect card covering
 all such damage or improper repairs.

All inspection of passenger cars for im-
 proper repairs will be made in accordance with the
 following rules:

1. Each Railroad Company shall maintain
 a list of all cars in its possession and shall
 keep it up to date. It shall also keep a record
 of all repairs made on its cars and shall
 file a copy of this record with the
 Interstate Commerce Commission.

APPENDIX.

CODE OF RULES

Governing the Condition of, and Repairs
to, Passenger Equipment Cars
in Interchange.

PREFACE.

These rules make car owners responsible for, and therefore chargeable with, the repairs to their cars necessitated by ordinary wear and tear in fair service, so that defect cards will not be required for any defects thus arising.

Railroad companies handling cars are responsible for damage done to any car by unfair usage, derailment or accident, and for improper repairs made by them, and they should make proper repairs at their own expense, or issue defect card covering all such damage or improper repairs.

All inspection of passenger cars for interchange will be made in accordance with the following rules:

1. Each Railway Company shall give to foreign cars, while on its line, THE SAME CARE AS TO OILING, PACKING, INSPECTION AND ADJUSTING BRAKES THAT IT GIVES ITS OWN CARS, except in case of cars on which work is done under

special agreement existing between the company owning the cars and the road operating the same.

2. The expenses of maintenance of passenger equipment operated in interchange or line service shall be divided into three classes, namely :

(a) Owner's defects.

(b) Delivering Company's defects.

(c) Line expenses proratable against the roads comprising the lines on a mileage basis.

3. (a) Owner's defects are those due to ordinary wear and tear.

(b) Delivering company's defects are those due to unfair usage, derailment or accident. Delivering company is solely responsible to car owners for any improper repairs made by them.

(c) Line expenses shall consist of the expense of terminal cleaning, icing, lubrication (oil, waste, tallow and labor) :

Oil lighting (oil, chimneys, wicks, burners, shades).

Gas lighting (gas, mantles, tips, domes, globes, bulbs, bowls).

Electric lighting (fuses, incandescent bulbs, charging currents).

Heating (terminal heating and coal furnished for individual car heaters en route).

Candles and broken glass.

4. The railway making the repairs for the defects not proratable against the line is privileged to bill the car owner for these repairs, unless there is evidence to indicate that the

damage was occasioned by unfair handling on the part of the delivering company.

5. Information as to mileage made by cars must be furnished promptly on request of owners by railways over which cars are run.

6. Only one journal bearing per journal may be charged per trip.

7. No labor charge shall be made for applying brake shoes, incandescent bulbs, journal bearings, hose (air, steam or signal), mantles, tips, or for icing, filling lamps, charging batteries, gasing tanks or coaling cars.

8. No credit to be allowed for burned-out incandescent bulbs, burned-out fuses or scrap brake shoes removed.

NOTE.—Steel back brake shoes not to be removed if over one-half ($\frac{1}{2}$) inch thick; gray iron shoes not to be removed if over three-quarters ($\frac{3}{4}$) inch thick.

9. Loss of metal from tires of steel-tired wheels, caused by flat sliding, is chargeable to the company on whose road the damage occurs.

NOTE.—Loss of service metal from steel-tired wheels as a result of sliding to be measured from point where slide begins. One-sixteenth ($\frac{1}{16}$) inch of metal to be allowed for flat spots under two and one-half ($2\frac{1}{2}$) inches long and one-eighth ($\frac{1}{8}$) inch of metal to be allowed for flat spots two and one-half ($2\frac{1}{2}$) to three and one-half ($3\frac{1}{2}$) inches in length, both inclusive.

10. (a) Axles broken under fair usage or having journals one-half ($\frac{1}{2}$) inch or more under the standard for car (except for three and three-quarters by seven ($3\frac{3}{4}$ by 7) which will be condemned at three and one-half ($3\frac{1}{2}$) inches may be renewed at the expense of the car owner. Size of journal should be stenciled on truck.

(b) Cut journals, axles bent or broken or rendered unsafe by unfair usage, derailment or accident, shall be renewed at the expense of the railway on whose line the damage occurs.

(c) Where necessary to true up axles in cases of cut journals, where the journal is reduced below the limit as prescribed in Rule 10-a, axle must be changed at the expense of company cutting journal.

11. (a) Charge for terminal car heating to be 25 cents per day of 24 hours or less.

11. (b) Cars lying at stations for over forty-eight hours, expense of heating to be borne by railway in whose possession cars may be.

12. (a) Brakes must be in perfect working order. Cylinders, triple valves and slack adjusters must have been cleaned and oiled within six (6) months, and in case of cars equipped with high-speed brakes, triple and high-speed valves must be cleaned every three (3) months and date of last cleaning and oiling stenciled on brake cylinder and triple valve with white paint.

(b) The adjustment of piston travel based on not less than seventy (70) pounds initial

pressure must not be less than five (5) inches nor more than eight (8) inches.

On electrically lighted cars furnished to foreign roads, where no agreement is made, the following charge shall be made per day for use of batteries:

	Depreciation.	Current.	Total.
	Cents.	Cents.	Cents.
32 cells	46	29	75
16 cells	23	14	37

DEFECTS IN WHEELS — OWNERS RESPONSIBLE.

13. (a) Loose wheels.

(b) Variation from gauge (see Fig. 8 for wheels cast prior to M. C. B. standard tread and flange adopted in 1907, and Fig. 9 for wheels cast after January 1, 1908).

WHEELS — CAST-IRON.

14. (a) Shelled out; wheels with defective treads on account of pieces shelling out; if the spots are over one (1) inch or so numerous as to endanger the safety of the wheel.

(b) Tread worn hollow; if tread is worn hollow $\frac{1}{8}$ inch or over.

(c) Worn flanges; flanges having flat vertical surfaces extending $\frac{7}{8}$ inch or more from tread, or, flanges 1 inch thick or less, gauged at a point $\frac{3}{8}$ inch above tread.

(d) Gauge: for condemning worn flanges of cast-iron wheels under passenger cars to be the same as is used for condemning worn flanges of cast-iron wheels under freight cars of 80,000 pounds capacity or over.

(e) Burst; if wheel is cracked from wheel fit outward by pressure from axle.

(f) Flange, rim, tread, plate brackets or any other part of wheel, either cracked, chipped or broken under fair usage.

WHEELS — STEEL-TIRED.

15. (a) Loose, broken or cracked hubs, plates, bolts, retaining ring or tire, occurring under fair usage.

(b) Worn flange or tire; with flange 15-16 inch thick or less or having flat vertical spot extending 1 inch or more from tread, or with tire thinner than shown in Figs. 1, 2, 3 and 4.

(c) Gauge for condemning worn flanges of steel and steel-tired wheels under passenger cars to be the same as is used for condemning worn flanges of steel and steel-tired wheels under freight cars.

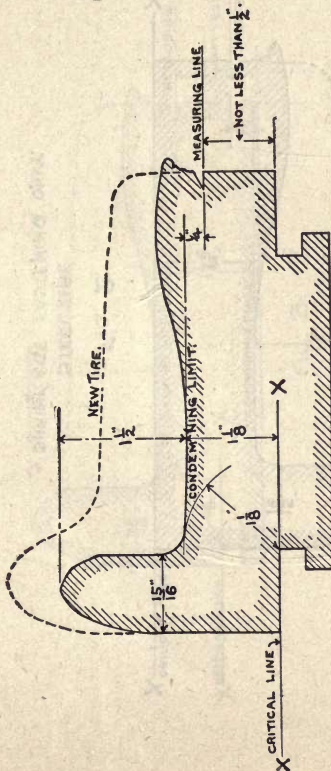


FIG. 1.
STEEL TIRE.
RETAINING RING FASTENING.

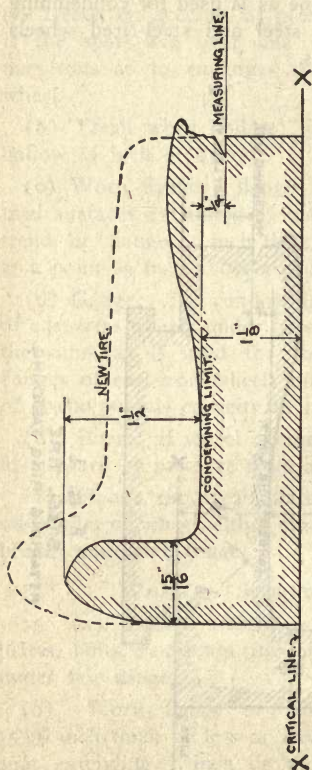


FIG. 2.

STEEL TIRE.
SHRINKAGE FASTENING ONLY.

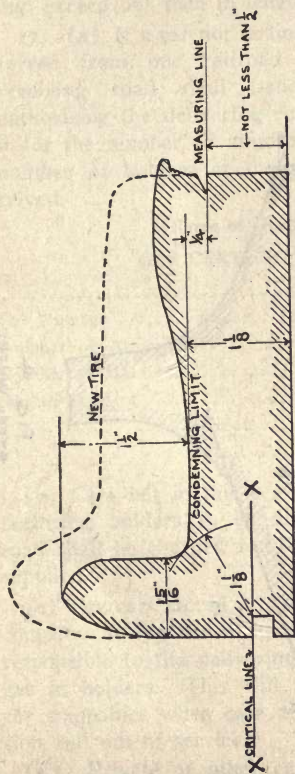


FIG. 3.
STEEL TIRE.
RETAINING RING FASTENING.

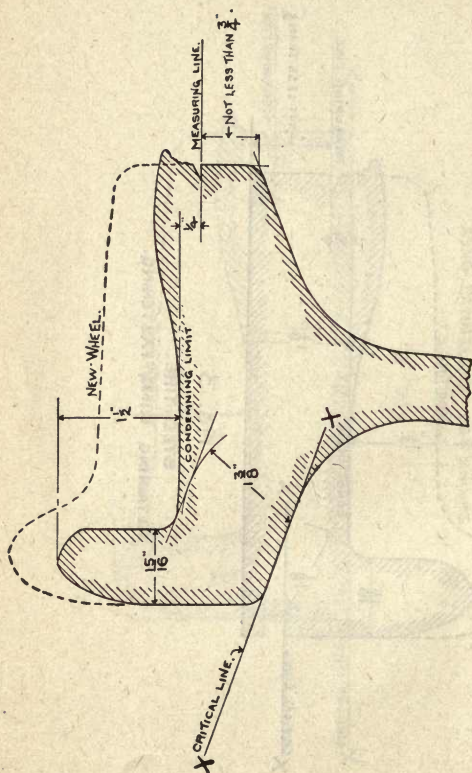


FIG. 4
STEEL WHEEL.

DELIVERING COMPANY RESPONSIBLE.

16. Flat spots; if flat spots, caused by sliding, exceed one inch in length.

17. (a) If a car not in line service is transferred from one railroad to another, the receiving road shall issue gas certificate authorizing the delivering road to bill against it for the number of atmospheres of gas and number of holders at the time car was received.

(Name of Road.)

GAS CERTIFICATE.

.....
 Car Number Initial
 Number of Atmospheres
 Number of Holders.....
 Size of Holders
 Station, ...1900
Inspector.

(b) Cars not in line service in interchange requiring holders to be filled, the receiving road shall be charged for the quantity of gas supplied.

(c) For cars stored in shops for repairs the company having car in its possession shall be responsible to the delivering company for the gas in holders. This will apply to sleeping-car companies when cars are in their possession and out of service.

(d) Private or other cars, except regular line cars, when offered in interchange equipped with steam hose couplings that will not couple

with the standard on the receiving line must be changed by receiving company; the hose removed to accompany car and be reapplied when car leaves the line.

18. The depreciation of all passenger equipment cars due to age shall be figured at 3 per cent per annum upon the yearly depreciated value of same, to continue not to exceed 50 per cent of its original value. The above method of depreciation applies equally to either bodies or trucks of such cars. No depreciation shall be allowed on the value of air brakes.

19. This code of rules is to apply to all equipment interchanged in passenger trains.

20. Bills for line charges shall be made and rendered monthly and prices for materials and labor shall be in accordance with accompanying schedule.

21. Air-brake hose applied must be made in accordance with specifications for M. C. B. standard $1\frac{3}{8}$ -inch hose, and so labeled.

22. This Code of Rules shall take effect September 1, 1911.

LIST OF PRICES FOR MAINTENANCE OF PAS- SENGER EQUIPMENT IN INTERCHANGE.

MATERIAL.	NEW.	SECOND- HAND.	SCRAP.
Axle, 40,000 lbs.	\$11.50	\$ 6.25	\$4.25
Axle, 60,000 lbs.	14.00	7.75	5.25
Axle, 80,000 lbs.	17.75	10.00	6.50

MATERIAL.	CHARGE.	CREDIT.
Air-brake hose, M. C. B. Standard, 1 $\frac{3}{4}$ ", complete with fittings, applied to car..	\$2.00	.....
Air brake or signal hose, credit for fittings.	.....	\$0.80
Air-signal hose, 1", complete with fittings, applied to car.	1.75	.....
Backs of seats, and cushions of passenger cars, either vestibule or common, remov- ing and beating, per car.	.65	.....
Bel's or signal cord and couplings, per car	.75	.....
Bolts, nuts and forgings, per lb.	.03	.00 $\frac{3}{4}$
Bowls, gas.	At cost.	.....
Brake shoes, Diamond S, applied, each, no credit for scrap.	.50	.....
Bulbs, gas.	At cost.	.....
Burners, dual wicks, each.	.30	.....
Burners, round wick, each.	.50	.....
Candles, per lb.	.15	.....
Carpets, seats, draperies, etc., parlor and sleeping cars, removing and beating, per car.	1.00	.....
Chain, per lb.	.05	.01
Chimneys, dual wick, each.	.06	.....
Chimneys, round wick, each.	.11	.....
Cleaning baggage cars, each.	.50	.....
Cleaning common passenger and combina- tion cars, each.	.70	.....
Cleaning mail cars, each.	1.00	.....
Cleaning parlor and sleeping cars, exclusive of bedding, per car.	1.75	.....
Cleaning vestibuled passenger and combi- nation cars, each.	1.00	.....
Coal (including labor), per ton.	6.00	.....
Cushions and backs of seats of passenger cars, vestibule or common, removing and beating, per car.	.65	.....
Domes, gas, each.	.50	.....
Draperies, seats, carpets, etc., parlor and sleeping cars, removing and beating, per car.	1.00	.....

MATERIAL.	CHARGE.	CREDIT.
Electric current for charging batteries....	At cost.	.....
Electric lighting material, incandescent bulbs, fuses, etc.....	At cost.	.....
Elm lumber, per foot.....	.03½	.....
Forgings, bolts and nuts, per lb.....	.03	\$0.00½
Fuses.....	At cost.	.....
Gas bowls.....	At cost.	.....
Gas bulbs.....	At cost.	.....
Gas mantels.....	At cost.	.....
Gas, Pintsch, per receiver.....	.85	.....
Gas tips.....	At cost.	.....
Glass, per light.....	At cost.	.....
Glass, setting, per light.....	.30	.....
Globes, gas.....	At cost.	.....
Hickory lumber, per ft.....	.03½	.....
Hose, air brake or signal, complete with fittings, applied to car, each:		
1" signal hose, applied.....	1.75	.....
1½" M. C. B. Standard hose, applied....	2.00	.....
Hose, air brake or signal, credit for fittings.	.....	.80
Hose, 1½", straight port. steam, complete with fittings, applied to car.....	6.50	.....
Hose, as above, 1½".....	6.50	.....
Hose, as above, 1".....	5.00	.....
Hose, as above, 1½" and 1½", credit for fit- tings.....	.....	5.25
Hose, as above, 1", credit for fittings.....	.....	4.00
Ice (including labor), per cwt.....	.30	.....
Incandescent bulbs.....	At cost.	.....
Iron, cast, per lb.....	.02	.006
Iron, malleable, per lb.....	.03½	.00½
Journal bearings, brass or bronze, lined or unlined, per lb., applied.....	.18	.13
Journal bearings, cast steel or malleable iron back, credit for scrap, per lb.....	.....	.04
Journal bearings, filled brass or bronze shell, per lb., applied.....	.14	.10
Journal bearings. Weights to be charged and credited as follows:	Lbs.	Lbs.
7" long and over, but not 8" long.....	10	6
8" long and over, but not 9" long.....	13	8
9" long and over, but not 10" long.....	20	12
10" long and over.....	25	15
Labor changing wheels, per pair.....	2.60	.....
Labor, on lubrication, per hour.....	.24	.....
Labor, on repairs, per hour.....	.30	.....
Loss of metal from steel or steel-tired wheels, per 1-16".....	1.50	.....
Lumber (oak, pine, hickory, poplar and elm), per ft.....	.03½	.....
Mantels, gas.....	At cost.	.....
Nuts, bolts and forgings, per lb.....	.03	.00½
Oak lumber, per ft.....	.03½	.....

MATERIAL.	CHARGE.	CREDIT.
Oil, Galena, car, per gallon.....	\$0.22	.....
Oil, Galena, coach, per gallon.....	.35	.....
Oil, illuminating, American roads, per gal..	.11	.....
Oil, illuminating, Canadian roads, per gal..	.16	.....
Pine lumber, per ft.	.03½	.....
Poplar lumber, per ft.	.03½	.....
Removing, turning and replacing same, pair steel-tired wheels.....	5.00	.....
Seat backs and cushions of passenger cars, either vestibule or common, removing and beating, per car	.65	.....
Seats, carpets, draperies, etc., parlor and sleeping cars, removing and beating, per car	1.00	.....
Shades, Acme lamp, each.....	.45	.....
Shades, common lamp, each.....	.25	.....
Signal or bell cord and coupling, per car..	.75	.....
Steam hose, 1½", straight port, complete with fittings, applied to car.....	6.50	.....
Steam hose, 1½", straight port, complete with fittings, applied to car.....	6.50	.....
Steam hose, 1", straight port, complete with fittings, applied to car.....	5.00	.....
Steam hose, 1½ or 1½", credit for fittings..	.....	\$5.25
Steam hose, 1", credit for fittings.....	.....	4.00
Steel castings, per lb.....	.04½	.00½
Steel, spring (not springs), per lb.....	.05	.00½
Taking out and beating cushions and backs of seats of passenger cars, either vestibule or common, per car.....	.65	.....
(NOTE.—No additional charge for cleaning trucks of parlor or sleeping cars.)		
Taking out carpets, seats, draperies, etc., from parlor and sleeping cars and beating them, per car	1.00	.....
Tallow per lb	.06	.....
Turning steel-tired wheels, per pair.....	1.50	.....
Waste, woolen, per lb.....	.12½	.....
Waste, cotton, per lb	.06	.....
Wicks, dual, each.....	.00½	.....
Wicks, round, each	.02	.....

MATERIAL.	NEW.	SECOND- HAND.	SCRAP.
Wheels, cast, 36"	\$10.50	\$7.75	\$5.25
Wheels, cast, 33"	9.00	7.00	4.75

MATERIAL.	CHARGE.	CREDIT.
Wheels, labor changing, per pair.....	\$2.00	.....
Wheels, solid steel or steel-tired new or re-tired.....	At cost.	.....
Wheels, steel or steel-tired loss of metal from, per 1-16".....	\$1.50	.....
Wheels, steel-tired, removing, turning and replacing same, per pair.....	5.00	.....
Wheels, steel-tired, turning, per pair.....	1.50	.....

NOTE.—Cost price to be charged for material not in list above.

LIST OF RAILROAD COMPANIES.

The following is a complete list of railroad companies which have given notice of the adoption of the Code of Rules for the interchange of passenger equipment cars:

Arms Palace Horse Car Co.
 Atlanta & Birmingham Air Line.
 Atlantic, Valdosta & Western.
 Baltimore & Ohio.
 Bangor & Aroostook.
 Boston & Albany.
 Boston & Maine.
 Burlington, Cedar Rapids & Northern.
 Butte, Anaconda & Pacific.
 Cairo, Vincennes & Chicago.
 Canadian Pacific.
 Carolina, Clinchfield & Ohio.
 Central of Georgia.
 Central Vermont.
 Chesapeake & Ohio.
 Chicago & Eastern Illinois.
 Chicago & Erie.
 Chicago & North Western.
 Chicago, Burlington & Kansas City.
 Chicago, Burlington & Quincy.
 Chicago, Milwaukee & Puget Sound.
 Chicago, Milwaukee & St. Paul.
 Chicago, Rock Island & Pacific.
 Choctaw, Oklahoma & Gulf.
 Cincinnati, Hamilton & Dayton.
 Cincinnati, New Orleans & Texas Pacific.
 Cleveland, Cincinnati, Chicago & St. Louis.
 Cleveland, Lorain & Wheeling.
 Cleveland Terminal & Valley.
 Colorado & Southern.
 Cornwall & Lebanon.
 Delaware, Lackawanna & Western.
 Denver & Rio Grande.
 Detroit, Toledo & Milwaukee.
 Detroit & Lima Northern.

Doniphan, Kensett & Searcy.
 El Paso & Southwestern.
 Erie.
 El Paso & Southwestern System.
 Evansville & Terre Haute.
 Evansville & Indianapolis.
 Fitchburg.
 Florida East Coast.
 Fort Worth & Denver City.
 Golden Circle.
 Grand Rapids & Indiana.
 Grand Trunk.
 Grand Trunk Pacific.
 Green Bay & Western.
 Hannibal & St. Joseph.
 Hocking Valley.
 Hutchison & Southern.
 Illinois Central.
 Kanawha & Michigan.
 Kansas City Southern.
 Kansas City, St. Joseph & Council Bluffs.
 Lake Shore & Michigan Southern.
 Lehigh Valley.
 Louisiana & Arkansas.
 Manitoba & North-Western Railway of Canada.
 Mason City & Fort Dodge.
 Michigan Central.
 Midland Valley.
 Minneapolis & St. Louis.
 Mississippi River & Bonne Terre.
 Mississippi River, Hamburg & Western.
 Missouri Pacific.
 Mobile & Birmingham.
 Nacozari.
 Nashville, Chattanooga & St. Louis.
 Nevada Copper Belt.
 New York Central & Hudson River.
 New York, Ontario & Western.
 New York & Ottawa.
 Northern Pacific.
 Oregon Railway & Navigation Co.
 Pennsylvania, Poughkeepsie & Boston.

Pere Marquette.
 Philadelphia & Reading.
 Pittsburgh & Lake Erie.
 Pittsburgh & Western.
 Plant System.
 Rio Grande, Sierra Madre & Pacific.
 Rio Grande Western.
 Rock Island & Peoria.
 San Antonio & Aransas Pass.
 Seaboard Air Line.
 Sioux City & Northern.
 Southern.
 Southern Indiana.
 Southern Pacific Company.
 South Florida.
 Southwestern of Arizona.
 Spokane Falls & Northern.
 St. Louis, Chicago & St. Paul.
 St. Louis, Iron Mountain & Southern.
 St. Louis, Kansas City & Colorado.
 St. Louis, Keokuk & North-Western.
 St. Louis Southwestern.
 St. Louis Southwestern of Texas.
 St. Louis & Hannibal.
 Temiskaming & Northern Ontario.
 Tennessee Central.
 Texas & Pacific.
 Toledo & Ohio Central.
 Toledo & Ohio Central Extension
 Toledo, Columbus & Cincinnati.
 Trinity & Brazos Valley.
 Tyler South-Eastern.
 Union Pacific.
 United Counties.
 Vera Cruz & Pacific.
 Wabash.
 West Virginia Central & Pittsburgh.
 Wheeling & Lake Erie.
 Zanesville & Western.

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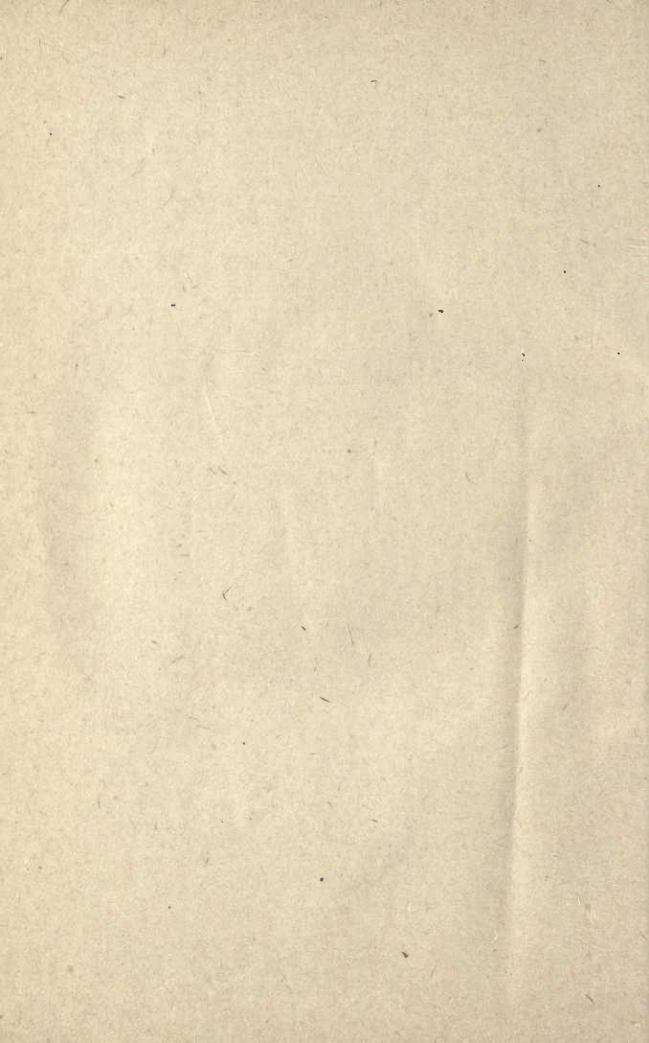
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